

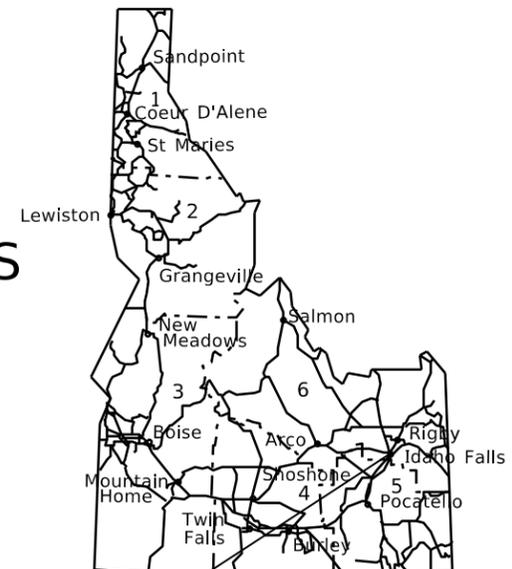
INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	PROJECT CLEARANCE SUMMARY
3 - 4	TYPICAL SECTIONS
5 - 6	ROADWAY SUMMARY SHEETS
7	SEWER PIPE SUMMARY SHEET
8 - 13	CURB DETAIL SHEETS
14 - 15	DRAINAGE PLAN SHEETS
16 - 19	DRAINAGE PROFILE SHEETS
20	DRAINAGE DETAIL SHEET
21 - 23	DRAINAGE POND PLAN SHEETS
24	POND CROSS SECTION SHEET
25	DRAINAGE POND DETAIL SHEET
26 - 28	MATERIALS QUANTITY SHEETS
29	SIGNAL INTERSECTION PLAN
30	CONDUIT DIAGRAM
31	SIGNAL FIELD WIRE DIAGRAM
32	SIGNAL POLE MOUNTING DETAILS
33	SIGNAL HEAD SCHEDULE
34	SIGNAL PHASING DIAGRAM
35	CABINET FOUNDATION CONDUIT LAYOUT
36 - 38	TRAFFIC SIGNAL DETAILS
39	SIGNS SUMMARY SHEET
40 - 43	SIGNING AND HORIZONTAL CONTROL
44 - 47	PAVEMENT MARKINGS
48	GENERAL TRAFFIC CONTROL NOTES
49 - 54	TEMPORARY TRAFFIC CONTROL SHEETS
55	TEMPORARY CURB RAMP DETAILS
56	PEDESTRIAN DETOUR DETAILS
57 - 61	UTILITY PLAN SHEETS
1	TOTAL OWNERSHIP MAP
1-33	STANDARD DRAWINGS

# IDAHO TRANSPORTATION DEPARTMENT

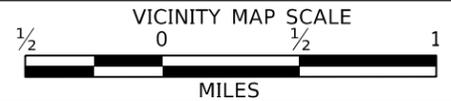
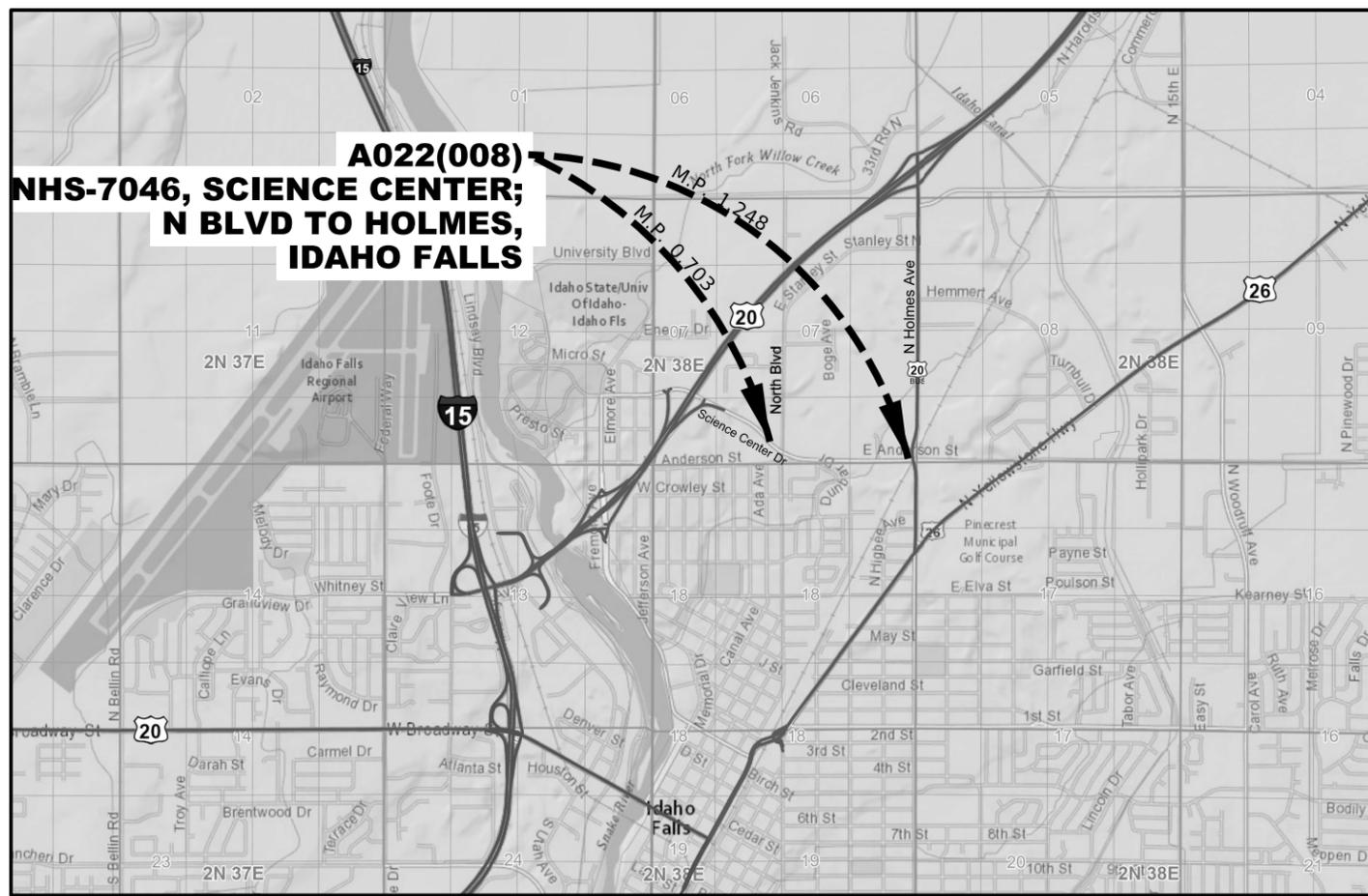
## PLAN AND PROFILE OF PROPOSED NHS-7046, SCIENCE CENTER; N BLVD TO HOLMES, IDAHO FALLS

### FEDERAL AID PROJECT NO. A022(008) KEY NO. 22008 BONNEVILLE COUNTY

SEPTEMBER 2025



NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES, IDAHO FALLS  
M.P. 0.703 M.P. 1.248  
SEGMENT CODE 003960



**DESIGN DESIGNATION**

ADT 2026	14880
ADT 2046	20710
DHV 2026	1490
DHV 2046	2070
D	90/10
V	35 MPH
<b>TRUCKS:</b>	
ADT 2027	650
ADT 2047	1110
DHV 2027	50
DHV 2047	80

REVISIONS			
NO.	DATE	BY	DESCRIPTION

THE DIMENSIONS SHOWN ON THE PLANS SHALL BE ATTAINED WITHIN LIMITS OF PRECISION THAT GOOD CONSTRUCTION PRACTICES WILL PERMIT

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
CADD FILE NAME 22008 title.DGN  
DRAWING DATE: March 18, 2025

**IDAHO TRANSPORTATION DEPARTMENT**  
YOUR Safety→YOUR Mobility→YOUR Economic Opportunity



**Horrocks.**

PROJECT NO.  
A022(008)

TITLE SHEET  
NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS

ENGLISH  
COUNTY BONNEVILLE  
KEY NUMBER 22008  
SHEET 1 OF 61

*Jana Kral*  
Approved for Advertising  
11/03/2025  
Date Approved

CLEARANCES		+ CLEARED UNDER PROJECT NO.	+ APPROVAL DATE
PROJECT STANDARDS		A022(008)	02/20/2025
CHARTER APPROVAL <input type="checkbox"/> AASHTO <input checked="" type="checkbox"/> 3R <input type="checkbox"/> 1R <input type="checkbox"/> STATE		N/A	
<input type="checkbox"/> PP <input type="checkbox"/> OTHER _____		N/A	
DESIGN EXCEPTIONS: _____		N/A	
PUBLIC HEARING WAIVER _____		A022(008)	02/20/2025
PUBLIC HEARING DATE (Latest hearing date held or scheduled for opportunity) _____		N/A	
DESIGN APPROVAL _____		A022(008)	02/20/2025
RECLAMATION PLAN APPROVAL NO(S) _____		N/A	
AIRPORT _____		N/A	
Land Survey Monument Search and Documentation (I.C.55-1613) _____		A022(008)	03/18/2024
R/W CERTIFICATE: Issued by <input checked="" type="checkbox"/> HQ <input type="checkbox"/> DISTRICT		A022(008)	07/15/2025
TRIBAL LANDS: <input type="checkbox"/> AGREEMENT REQUIRED <input type="checkbox"/> SPECIAL PROVISIONS FOR CONTRACT PROPOSAL		N/A	
BRIDGE PS & E _____		N/A	
ENVIRONMENTAL DECISION: TYPE <input checked="" type="checkbox"/> CAT-EX <input type="checkbox"/> FONSI <input type="checkbox"/> ROD		A022(008)	12/12/2024
ENVIRONMENTAL RE-EVALUATION _____		A022(008)	08/27/2025
PERMITS		+ EXPIRATION DATE	
IDAHO DEPARTMENT OF WATER RESOURCES PERMIT NO(S) _____		N/A	
US ARMY CORPS OF ENGINEERS 404 PERMIT NO(S) _____		N/A	
OTHER _____		N/A	
DEQ SECTION 401 WATER QUALITY CERTIFICATION _____ <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
NPDES GENERAL PERMIT/SWPPP REQUIRED _____ <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
POLLUTION PREVENTION PLAN REQUIRED _____ <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
AGREEMENTS (List Appropriate Name)			
LOCAL: CITY _____		N/A	
COUNTY _____		N/A	
HIGHWAY DISTRICT _____		N/A	
ROAD CLOSURE AND MAINTENANCE _____		N/A	
STATE/LOCAL CONSTRUCTION <u>City of Idaho Falls</u>		A022(008)	08/07/2025
IRRIGATION DISTRICT(S): Crossing Agreement Required _____ <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (Signatures Required on either Structure Drawing or Bridge Sheet)			
UTILITIES: List all Utilities shown on plans		RETAIN & PROTECT	
Co. <u>City of Idaho Falls, Fiber</u>		N/A	
Co. <u>City of Idaho Falls, Power</u>		N/A	
Co. <u>City of Idaho Falls Public Works, Sewer</u>		N/A	
Co. <u>City of Idaho Falls Public Works, Water</u>		1/06/2025	
Co. <u>Intermountain Gas Company</u>		12/17/2024	
Co. <u>Lumen</u>		1/13/2025	
Co. <u>Sparklight</u>		12/17/2024	
RAILROAD List all Railroads encroached upon		+ AGREEMENT	
		+ AGREEMENT FOR	EFFECTIVE DATE
Co. <u>Union Pacific Railroad</u>		RAILROAD FLAGGING	10/21/2024
Co. _____		N/A	799873

### ESTIMATING BASIS

Tack:  
CSS-1 Diluted Emulsified Asphalt for Tack Coat at 0.15 Gal/SY

Paving:  
PG 64-34 Asphalt Binder for Superpave HMA Pavement Class SP-3 at 5.6% by Weight of Mix, Including 0.5% Anti-Strip Additive (1/2" Nominal Aggregate)

Aggregate:  
1/2" Aggregate for Superpave HMA Pavement Class SP-3 at an Estimated 146 lb/cf Including Asphalt and Additives.  
3/4" Aggregate TY B for Base Estimated at 148 lb/cf, Including 7% Water (Est.)

Granular Subbase with RAP:  
Granular Subbase mixed with Less than 50% Recycled Asphalt Pavement (RAP), Category 1 or 2

Water for Dust Abatement:  
Estimated at 5" of water applied to areas disturbed by required earthwork activities

### NOTES

- Excavation, Tack, Base, Plant Mix, Etc., Have Been Increased on the Roadway Summary to Remove or Construct Gores, Tapers, Approaches, Etc.
- The Contractor shall be required to furnish a source (or sources) for all items on this project. They may be allowed to use State-Owned or State Controlled Sources
- Materials Reports are Available ~~07/15/2025~~ 07/15/2025 Contractors Use Upon Request.

All work on this project shall be governed by the latest Edition of the IDAHO STANDARD SPECIFICATION for HIGHWAY CONSTRUCTION, the SUPPLEMENTAL SPECIFICATIONS and the SPECIAL PROVISIONS

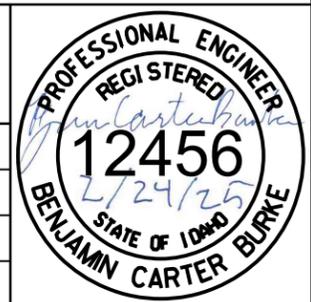
REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED R. TELFORD	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED B. BURKE	
DETAILED R. TELFORD	CADD FILE NAME 22008_pcs_001.dgn
DRAWING CHECKED B. BURKE	DRAWING DATE: February 20, 2025

**IDAHO TRANSPORTATION DEPARTMENT**  
YOUR Safety-YOUR Mobility-YOUR Economic Opportunity

PROJECT NO.  A022(008)	PROJECT CLEARANCE SUMMARY  NHS-7046, SCIENCE CENTER; N BLVD TO HOLMES, IDAHO FALLS
------------------------------	--

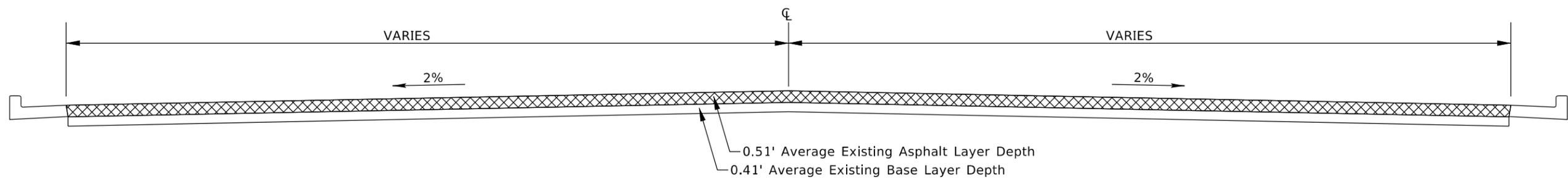
ENGLISH	
COUNTY	BONNEVILLE
KEY NUMBER	22008
SHEET	2 OF 61



+ ENTER "N/A" WHEN NOT APPLICABLE  
++ LPA PROJECTS - DATE ENTERED BY ROADWAY DESIGN WHEN PROJECT SENT TO PS&E.

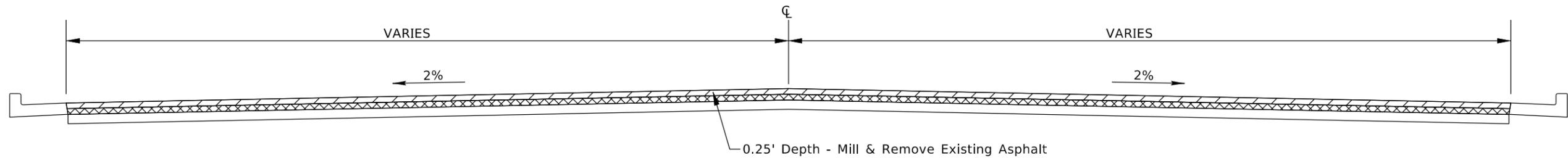
Science Center Drive  
EXISTING TYPICAL SECTION

M.P. 0.703 TO M.P. 1.248



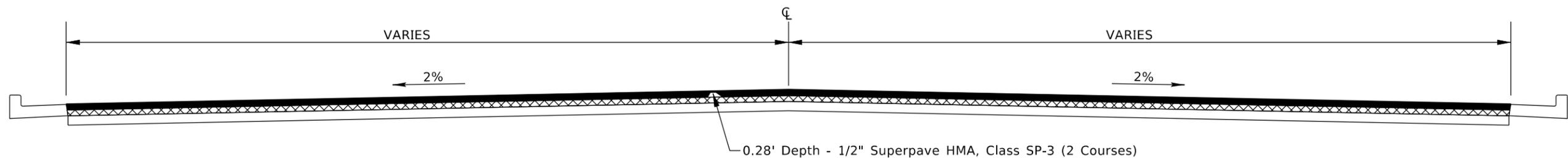
Science Center Drive  
MILL & REMOVE TYPICAL SECTION

M.P. 0.703 TO M.P. 1.248



Science Center Drive  
PROPOSED TYPICAL SECTION

M.P. 0.703 TO M.P. 1.248



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	R. TELFORD
DESIGN CHECKED	B. BURKE
DETAILED	R. TELFORD
DRAWING CHECKED	B. BURKE

SCALES SHOWN  
ARE FOR 11" X 17"  
PRINTS ONLY

CADD FILE NAME  
22008 typ\_001.DGN

DRAWING DATE:  
January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety→YOUR Mobility→YOUR Economic Opportunity



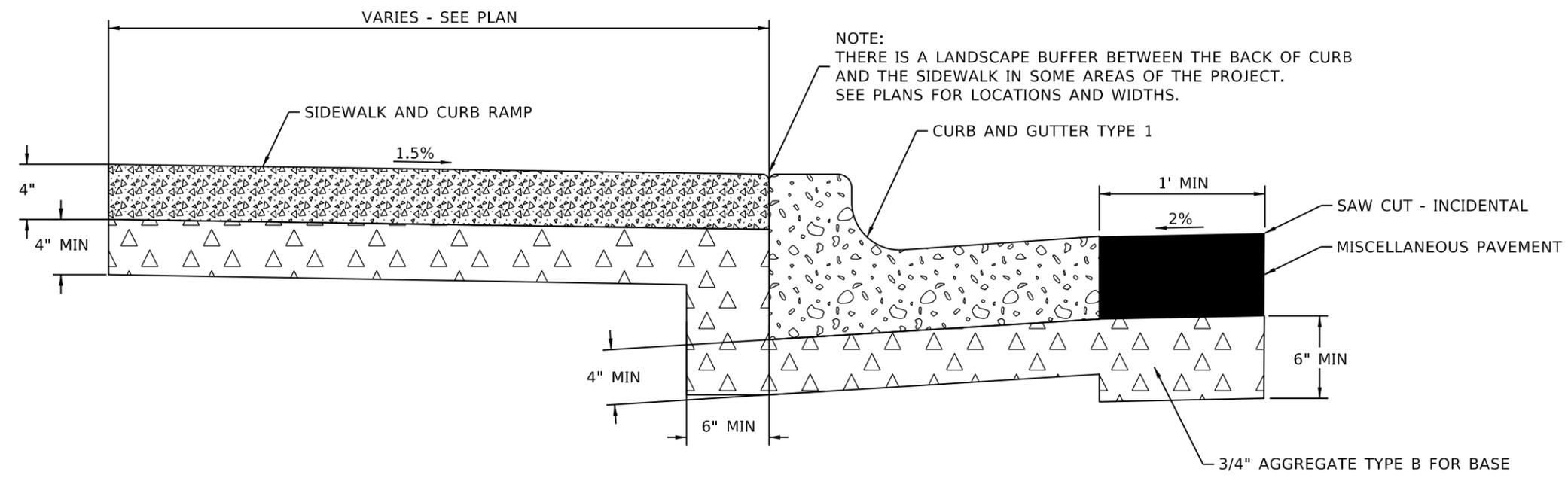
**Horrocks.**

PROJECT NO.  
  
A022(008)

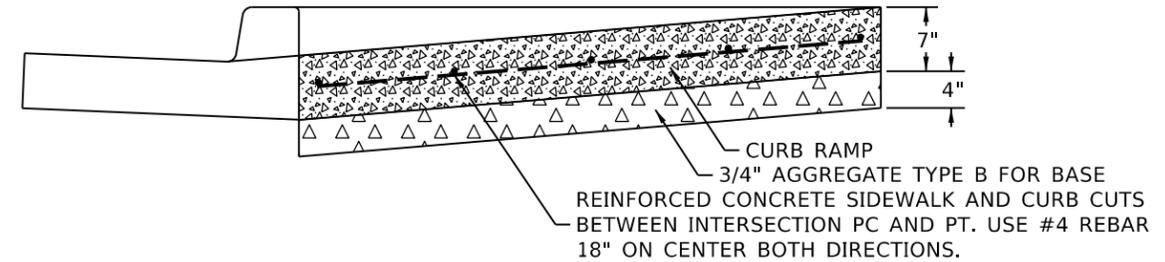
TYPICAL SECTIONS  
  
NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS

ENGLISH  
COUNTY BONNEVILLE  
KEY NUMBER 22008  
SHEET 3 OF 61

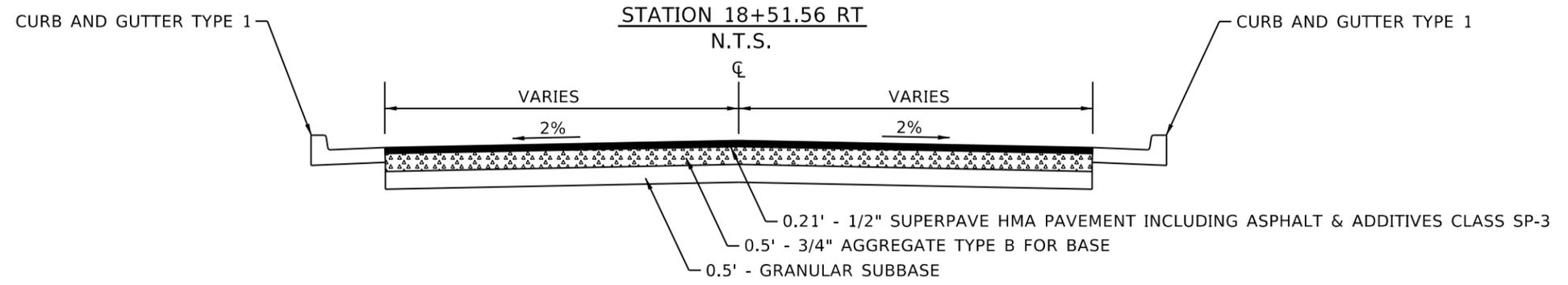
**PROPOSED CURB & GUTTER AND SIDEWALK TYPICAL SECTION**  
N.T.S.



**CURB RAMP BALLAST TYPICAL**  
N.T.S.



**APPROACH TYPICAL**  
STATION 18+51.56 RT  
N.T.S.



ADJUST MANHOLE COVERS		
1	N: 672,501.767	E: 691,965.626
2	N: 672,502.201	E: 692,312.955
3	N: 672,485.915	E: 692,809.047
4	N: 672,471.872	E: 692,844.948
5	N: 672,485.915	E: 692,845.696
6	N: 672,484.682	E: 693,090.051
7	N: 672,474.205	E: 693,256.929
8	N: 672,486.806	E: 693,356.624
9	N: 672,440.086	E: 693,356.798
10	N: 672,477.750	E: 693,465.952
11	N: 672,479.305	E: 693,573.270
12	N: 672,444.485	E: 693,619.980
13	N: 672,483.341	E: 693,762.614
14	N: 672,448.628	E: 693,879.538
15	N: 672,490.674	E: 693,927.361

ADJUST VALVE COVERS		
1	N: 672,503.300	E: 692,015.350
2	N: 672,493.698	E: 692,048.768
3	N: 672,481.664	E: 692,220.998
4	N: 672,485.482	E: 692,222.617
5	N: 672,452.066	E: 692,243.694
6	N: 672,451.218	E: 692,302.520
7	N: 672,459.761	E: 692,743.814
8	N: 672,461.322	E: 692,785.515
9	N: 672,469.810	E: 693,664.322
10	N: 672,463.068	E: 693,670.909
11	N: 672,475.571	E: 693,671.865
12	N: 672,496.227	E: 693,671.881
13	N: 672,469.382	E: 693,682.826

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED R. TELFORD	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED B. BURKE	CADD FILE NAME 22008 typ_002.DGN
DETAILED R. TELFORD	DRAWING DATE: January 22, 2025
DRAWING CHECKED B. BURKE	

**IDAHO TRANSPORTATION DEPARTMENT**  
YOUR Safety → YOUR Mobility → YOUR Economic Opportunity

**Horrocks.**

PROJECT NO.  A022(008)
------------------------------

TYPICAL SECTIONS  
NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS

ENGLISH
COUNTY BONNEVILLE
KEY NUMBER 22008
SHEET 4 OF 61



SHEET NUMBER															
STATION - STATION															
ITEM NO.	ITEM	UNIT	TOTAL												
202-005A	SELECTIVE REMOVAL OF TREES INCLUDING STUMPS	EACH	1												
203-006A	REMOVAL OF SIGN	EACH	8												
203-060A	REMOVAL OF CONCRETE SIDEWALK	SY	126												
203-070A	REMOVAL OF CURB AND GUTTER	FT	968												
203-121A	REMOVAL OF MISCELLANEOUS ITEMS (VALLEY GUTTER)	SY	113												
203-122A	REMOVAL OF MISCELLANEOUS ITEMS (ILLUMINATION)	EACH	5												
203-123A	REMOVAL OF MISCELLANEOUS ITEMS (WATERLINE AND VALVE)	FT	21												
205-005A	EXCAVATION	CY	1500												
212-095A	INLET PROTECTION	EACH	21												
301-010A	GRANULAR SUBBASE	CY	22												
303-022A	3/4" AGGREGATE TYPE B FOR BASE	TON	283												
401-020A	CSS-1 DILUTED EMULSIFIED ASPHALT FOR TACK COAT	GAL	6360												
405-240A	MISCELLANEOUS PAVEMENT	SY	109												
405-245A	APPROACH	EACH	1												
405-435A	SUPERPAVE HMA PAVEMENT INCLUDING ASPHALT & ADDITIVES CLASS SP-3 (NMA5 1/2", PG 64-34)	TON	3960												
431-005A	COLD MILLING	SY	21200												
605-025A	12" STORM SEWER PIPE	FT	560												
605-465A	MANHOLE TYPE C	EACH	5												
605-605A	INLET TYPE 1	EACH	12												
605-635A	ADJUST MANHOLE COVERS	EACH	15												
605-640A	ADJUST VALVE COVERS	EACH	13												
608-025A	12" APRON FOR PIPE	EACH	3												
614-015A	SIDEWALK	SY	484												
614-025A	CURB RAMP	SY	144												
615-491A	CURB AND GUTTER TYPE 1	FT	942												
615-651A	TRAFFIC SEPARATOR TYPE 1	FT	200												
616-090A	SPECIAL INSTALL SIGN	EACH	4												
619-010A	ILLUMINATION TYPE 2	LS	1												
620-020A	PLANTING TREE (SEEDLING OR CONTAINER)	EACH	3												
624-005A	LOOSE RIPRAP (D50=6")	CY	4												
626-005A	PEDESTRIAN CHANNELIZING DEVICES	FT	420												
626-010A	TEMPORARY TRAFFIC CONTROL SIGNS	SF	485												

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED R. TELFORD	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED B. BURKE	
DETAILED R. TELFORD	CADD FILE NAME 22008_rsum_1.dgn
DRAWING CHECKED B. BURKE	DRAWING DATE: June 30, 2025

**IDAHO**  
**TRANSPORTATION**  
**DEPARTMENT**  
YOUR Safety--YOUR Mobility--YOUR Economic Opportunity

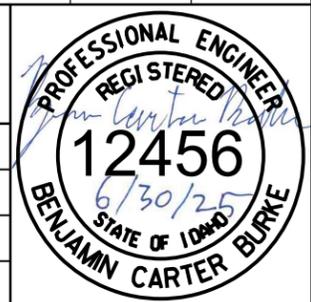


**Horrocks.**

PROJECT NO.  
  
A022(008)

ROADWAY SUMMARY SHEET  
  
NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS

ENGLISH  
COUNTY BONNEVILLE  
KEY NUMBER 22008  
SHEET 5 OF 61



SHEET NUMBER														
STATION - STATION														
ITEM NO.	ITEM	UNIT	TOTAL											
626-040A	BARRICADE TYPE 3, MODIFIED	EACH	6											
626-050A	DRUMS	EACH	40											
626-076A	ARROW BOARD TYPE C	HR	720											
626-080A	TEMPORARY CURB RAMP	EACH	5											
626-092A	TEMPORARY PAVEMENT MARKING TAPE	FT	900											
626-100A	MISCELLANEOUS TEMPORARY TRAFFIC CONTROL ITEMS	CA	5000											
626-105A	TEMPORARY TRAFFIC CONTROL MAINTENANCE	HR	90											
626-120A	FLAGGER CONTROL	HR	48											
626-135A	WEIGHTED BASE TUBULAR MARKERS	EACH	120											
630-010A	TRANSVERSE, WORD, SYMBOL, AND ARROW PAVEMENT MARKINGS - PREFORMED THERMOPLASTIC	SF	2572											
630-025A	LONGITUDINAL PAVEMENT MARKING - WATERBORNE	FT	23250											
634-005A	MAILBOX (TYPE B ASSEMBLY)	EACH	3											
640-005A	DRAINAGE GEOTEXTILE TYPE 2	SY	255											
640-010A	RIPRAP/EROSION CONTROL GEOTEXTILE	SY	18											
656-010A	SIGNAL HOUSING	EACH	14											
656-015A	INTERSECTION PREEMPTION DETECTION SYSTEM	EACH	1											
656-020C	INTERSECTION DETECTION SYSTEM-VIDEO	EACH	1											
656-025A	ELECTRIC SERVICE PEDESTAL TYPE 1	EACH	1											
656-030A	INTERSECTION SIGNAL STRUCTURE	EACH	1											
656-035A	INTERSECTION PEDESTRAIN SYSTEM	EACH	1											
656-040A	SIGNAL CABINET	EACH	1											
656-045A	SIGNAL CONTROLLER	EACH	1											
656-050A	PEDESTRIAN & TRAFFIC CONTROL SIGNAL HEAD FRANGIBLE POLES	EACH	4											
656-065A	COMBINED CABINET AND SERVICE PEDESTAL FOUNDATION	EACH	1											
656-070A	ADDITIONAL ELECTRICAL ITEMS	LS	1											
675-005A	SURVEY	LS	1											
675-010A	DIRECTED SURVEYING	CA	5,000											
676-015A	RECORD AND REESTABLISH PAVEMENT MARKINGS	LS	1											
677-005A	RECORD DRAWINGS	LS	1											
S900-50A	CONTINGENCY AMOUNT - MISCELLANEOUS WORK	CA	5,000											
S900-50B	CONTINGENCY AMOUNT - DIRECTED ROCK EXCAVATION	CA	10,000											
S900-50C	CONTINGENCY AMOUNT - DIRECTED STORMWATER AND EROSION CONTROL	CA	2,000											
S900-50D	CONTINGENCY AMOUNT - UNIDENTIFIED UTILITIES	CA	5,000											
S904-05A	SP UNDERGROUND SPRINKLER SYSTEM	LS	1											
S913-05A	SP FILTER SAND	CY	62											
S913-05B	SP ROCK MULCH	CY	188											
Z629-05A	MOBILIZATION	LS	1											

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED R. TELFORD	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED B. BURKE	
DETAILED R. TELFORD	CADD FILE NAME 22008_rsum_1.dgn
DRAWING CHECKED B. BURKE	DRAWING DATE: January 22, 2025

**IDAHO  
TRANSPORTATION  
DEPARTMENT**

YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

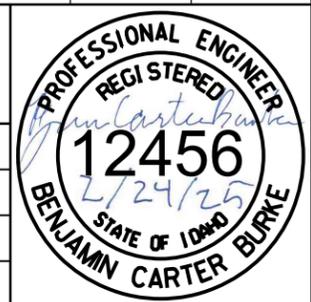


**Horrocks.**

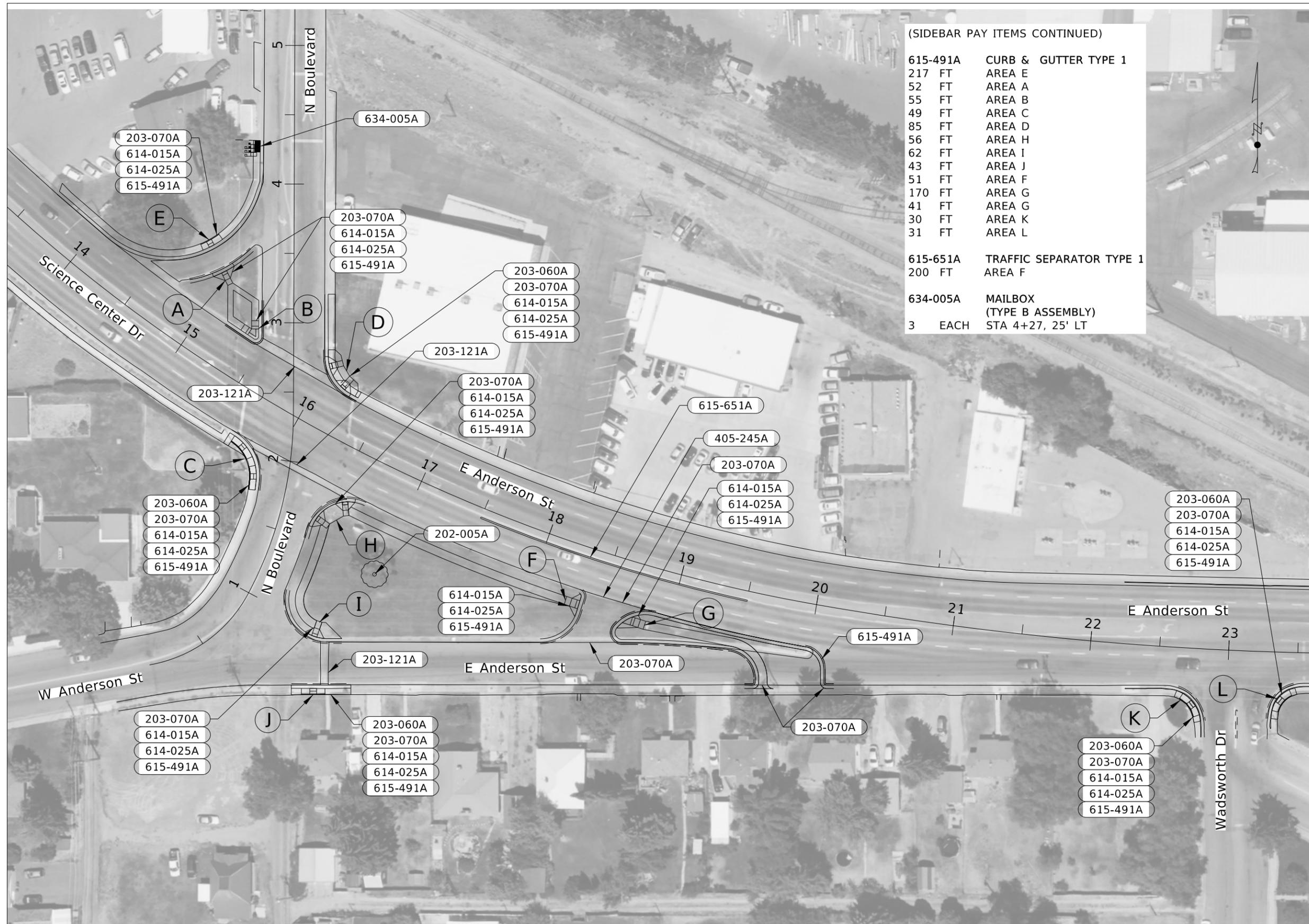
PROJECT NO.  
  
A022(008)

ROADWAY SUMMARY SHEET  
  
NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS

ENGLISH  
COUNTY BONNEVILLE  
KEY NUMBER 22008  
SHEET 6 OF 61







(SIDEBAR PAY ITEMS CONTINUED)

615-491A	CURB & GUTTER TYPE 1
217 FT	AREA E
52 FT	AREA A
55 FT	AREA B
49 FT	AREA C
85 FT	AREA D
56 FT	AREA H
62 FT	AREA I
43 FT	AREA J
51 FT	AREA F
170 FT	AREA G
41 FT	AREA G
30 FT	AREA K
31 FT	AREA L
615-651A	TRAFFIC SEPARATOR TYPE 1
200 FT	AREA F
634-005A	MAILBOX (TYPE B ASSEMBLY)
3 EACH	STA 4+27, 25' LT

202-005A	SELECTIVE REMOVAL OF TREES INCLUDING STUMPS
1 EACH	STA 16+97, 75' RT
203-060A	REMOVAL OF CONCRETE SIDEWALK
29 SY	AREA C
46 SY	AREA D
21 SY	AREA J
15 SY	AREA K
15 SY	AREA L
203-070A	REMOVAL OF CURB & GUTTER
217 FT	AREA E
52 FT	AREA A
55 FT	AREA B
49 FT	AREA C
84 FT	AREA D
56 FT	AREA H
62 FT	AREA I
43 FT	AREA J
57 FT	AREA F-G
202 FT	AREA F-G
21 FT	AREA F-G
9 FT	AREA F-G
30 FT	AREA K
31 FT	AREA L
203-121A	REMOVAL OF MISCELLANEOUS ITEMS (VALLEY GUTTER)
45 SY	AREA B-D
47 SY	AREA C-H
21 SY	AREA I-J
405-245A	APPROACH
1 EACH	STA 18+51 RT
614-015A	SIDEWALK
108 SY	AREA E
33 SY	AREA A-B
7 SY	AREA C
47 SY	AREA D
64 SY	AREA I-H
15 SY	AREA H
113 SY	AREA H-F
13 SY	AREA J
74 SY	AREA G
5 SY	AREA K
5 SY	AREA L
614-025A	CURB RAMP
10 SY	AREA E
9 SY	AREA A
12 SY	AREA B
20 SY	AREA C
16 SY	AREA D
16 SY	AREA H
8 SY	AREA I
9 SY	AREA J
11 SY	AREA F
13 SY	AREA G
10 SY	AREA K
10 SY	AREA L

REVISIONS			
NO.	DATE	BY	DESCRIPTION

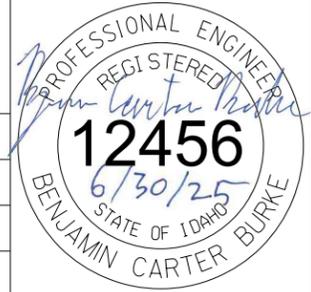
DESIGNED	J. BELL	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  CADD FILE NAME 22008_CRDO.DGN  DRAWING DATE: 30-JUN-2025
DESIGN CHECKED	B. BURKE	
DETAILED	A. HUNTSMAN	
DRAWING CHECKED	J. ALLEN	

**IDAHO TRANSPORTATION DEPARTMENT**  
 YOUR Safety → YOUR Mobility → YOUR Economic Opportunity

PROJECT NO.	A022(008)
-------------	-----------

**CURB RAMP OVERVIEW**  
 NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS

ENGLISH	12456
COUNTY	BONNEVILLE
KEY NUMBER	22008
SHEET	8 OF 61

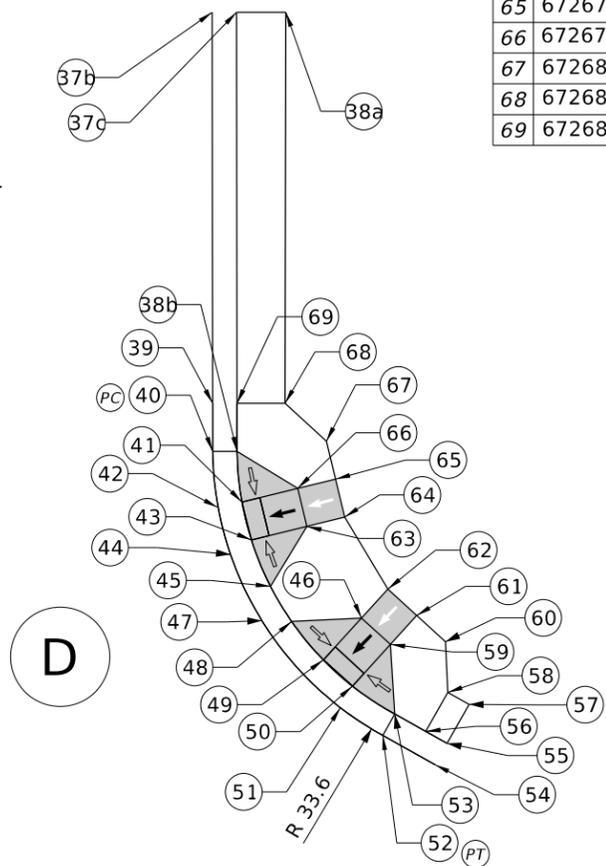
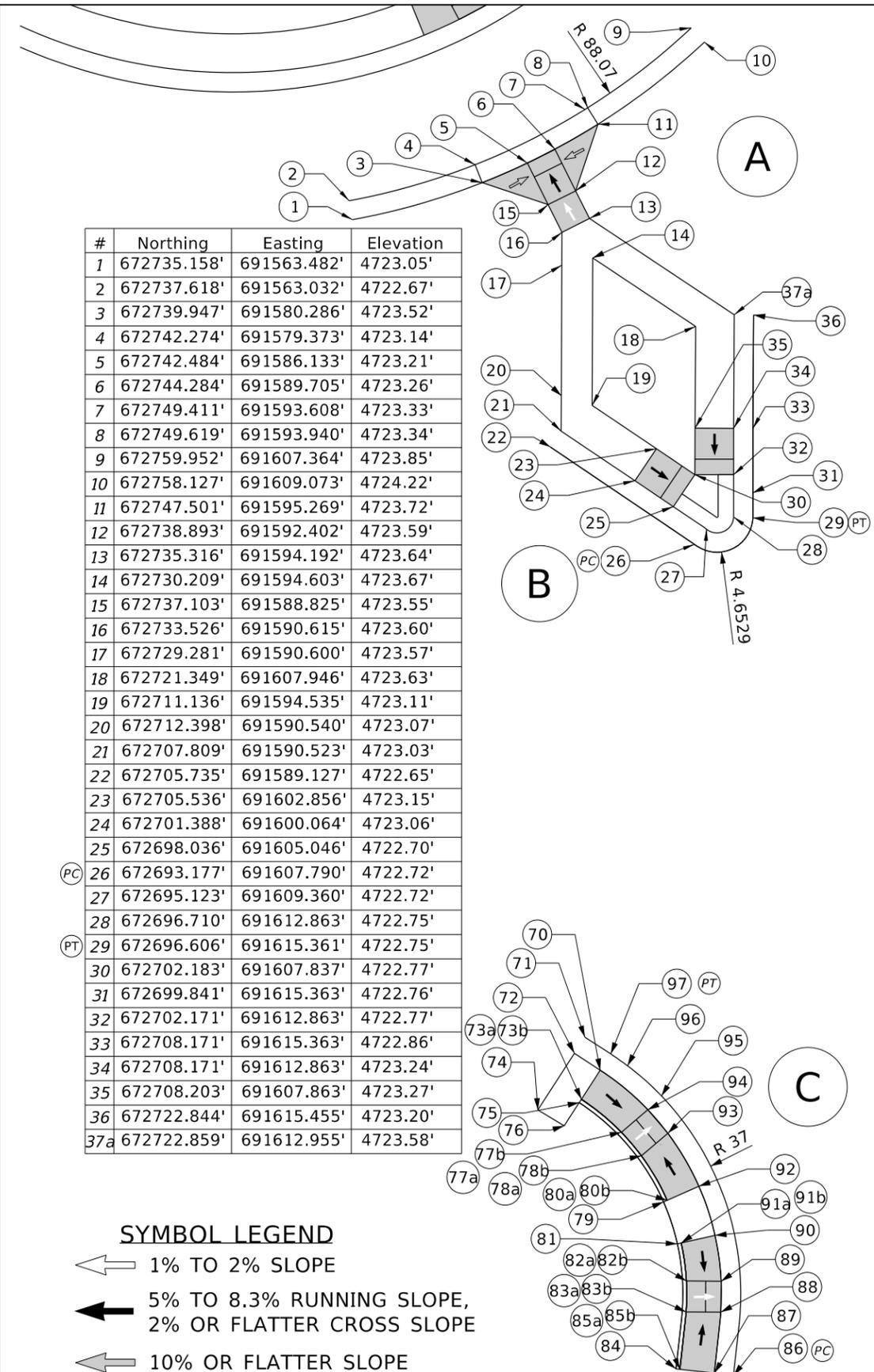


#	Northing	Easting	Elevation
1	672735.158'	691563.482'	4723.05'
2	672737.618'	691563.032'	4722.67'
3	672739.947'	691580.286'	4723.52'
4	672742.274'	691579.373'	4723.14'
5	672742.484'	691586.133'	4723.21'
6	672744.284'	691589.705'	4723.26'
7	672749.411'	691593.608'	4723.33'
8	672749.619'	691593.940'	4723.34'
9	672759.952'	691607.364'	4723.85'
10	672758.127'	691609.073'	4724.22'
11	672747.501'	691595.269'	4723.72'
12	672738.893'	691592.402'	4723.59'
13	672735.316'	691594.192'	4723.64'
14	672730.209'	691594.603'	4723.67'
15	672737.103'	691588.825'	4723.55'
16	672733.526'	691590.615'	4723.60'
17	672729.281'	691590.600'	4723.57'
18	672721.349'	691607.946'	4723.63'
19	672711.136'	691594.535'	4723.11'
20	672712.398'	691590.540'	4723.07'
21	672707.809'	691590.523'	4723.03'
22	672705.735'	691589.127'	4722.65'
23	672705.536'	691602.856'	4723.15'
24	672701.388'	691600.064'	4723.06'
25	672698.036'	691605.046'	4722.70'
26	672693.177'	691607.790'	4722.72'
27	672695.123'	691609.360'	4722.72'
28	672696.710'	691612.863'	4722.75'
29	672696.606'	691615.361'	4722.75'
30	672702.183'	691607.837'	4722.77'
31	672699.841'	691615.363'	4722.76'
32	672702.171'	691612.863'	4722.77'
33	672708.171'	691615.363'	4722.86'
34	672708.171'	691612.863'	4723.24'
35	672708.203'	691607.863'	4723.27'
36	672722.844'	691615.455'	4723.20'
37a	672722.859'	691612.955'	4723.58'

37b	672727.200'	691660.713'	4723.91'
37c	672727.203'	691663.213'	4724.28'
38a	672727.209'	691668.283'	4724.48'
38b	672682.277'	691663.274'	4723.70'
39	672687.200'	691660.758'	4723.40'
40	672682.290'	691660.774'	4723.33'
41	672677.154'	691663.720'	4723.25'
42	672676.524'	691661.340'	4723.24'
43	672673.217'	691664.746'	4723.18'
44	672671.721'	691662.608'	4723.17'

56	672653.614'	691682.633'	4723.70'
57	672656.381'	691687.069'	4723.91'
58	672657.612'	691684.893'	4723.86'
59	672662.525'	691679.002'	4723.60'
60	672662.787'	691684.653'	4723.75'
61	672665.481'	691681.697'	4723.67'
62	672668.176'	691678.740'	4723.66'
63	672674.601'	691670.441'	4723.60'
64	672675.545'	691674.327'	4723.65'
65	672679.432'	691673.383'	4723.65'
66	672678.487'	691669.496'	4723.60'
67	672683.319'	691672.438'	4723.85'
68	672687.191'	691668.189'	4724.13'
69	672687.197'	691663.258'	4723.78'

70	672625.156'	691595.579'	4723.38'
71	672629.432'	691593.586'	4722.95'
72	672627.335'	691592.224'	4723.26'
*73a	672621.382'	691593.128'	4723.47'
*73b	672621.391'	691593.134'	4723.46'
74	672620.030'	691587.480'	4723.67'
75	672620.963'	691592.856'	4723.47'
76	672617.954'	691590.902'	4723.53'
*77a	672617.120'	691598.313'	4723.55'
*77b	672617.125'	691598.322'	4723.06'
*78a	672614.069'	691600.903'	4723.59'
*78b	672614.076'	691600.910'	4723.11'
79	672608.120'	691603.783'	4723.60'
*80a	672608.322'	691604.241'	4723.67'
*80b	672608.326'	691604.250'	4723.59'
81	672602.693'	691605.570'	4723.68'
*82a	672597.900'	691606.742'	4723.81'
*82b	672597.900'	691606.752'	4723.38'
*83a	672593.900'	691606.699'	4723.85'
*83b	672593.900'	691606.709'	4723.43'
84	672586.515'	691605.391'	4723.93'
*85a	672586.460'	691605.888'	4723.93'
*85b	672586.459'	691605.898'	4723.92'
PC 86	672585.663'	691612.842'	4723.46'
87	672585.962'	691610.360'	4723.84'
88	672593.852'	691611.207'	4723.38'
89	672597.851'	691611.250'	4723.38'
90	672603.790'	691610.449'	4723.61'
*91a	672602.803'	691606.058'	4723.76'
*91b	672602.805'	691606.068'	4723.68'
92	672610.137'	691608.358'	4723.52'
93	672616.987'	691604.340'	4723.04'
94	672620.037'	691601.751'	4722.99'
95	672621.814'	691603.511'	4722.99'
96	672625.735'	691599.104'	4723.04'
PT 97	672627.253'	691596.941'	4723.01'



45	672668.468'	691666.706'	4723.50'
46	672665.219'	691676.046'	4723.60'
47	672664.965'	691665.817'	4723.11'
48	672664.886'	691668.860'	4723.49'
49	672660.929'	691672.136'	4723.15'
50	672658.256'	691675.112'	4723.18'
51	672656.046'	691673.882'	4723.18'
PT 52	672653.211'	691678.233'	4723.27'
53	672655.393'	691679.454'	4723.64'
54	672650.217'	691683.584'	4723.37'
55	672652.398'	691684.805'	4723.74'

**SYMBOL LEGEND**

↖ 1% TO 2% SLOPE

↙ 5% TO 8.3% RUNNING SLOPE,  
2% OR FLATTER CROSS SLOPE

↘ 10% OR FLATTER SLOPE

\*NOTE: NUMBERS ENDING WITH (a) DENOTE POSITION FOR CURB TOP  
WHILE NUMBERS ENDING WITH (b) DENOTE POSITION FOR CURB FLOWLINE

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	J. BELL
DESIGN CHECKED	B. BURKE
DETAILED	A. HUNTSMAN
DRAWING CHECKED	J. ALLEN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 22008 CRD Sht.DGN

DRAWING DATE: 30-JUN-2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety → YOUR Mobility → YOUR Economic Opportunity

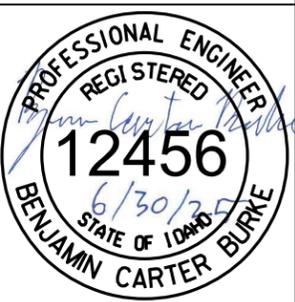
**Horrocks.**

PROJECT NO.	A022(008)
-------------	-----------

**CURB DETAIL SHEET**

NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS

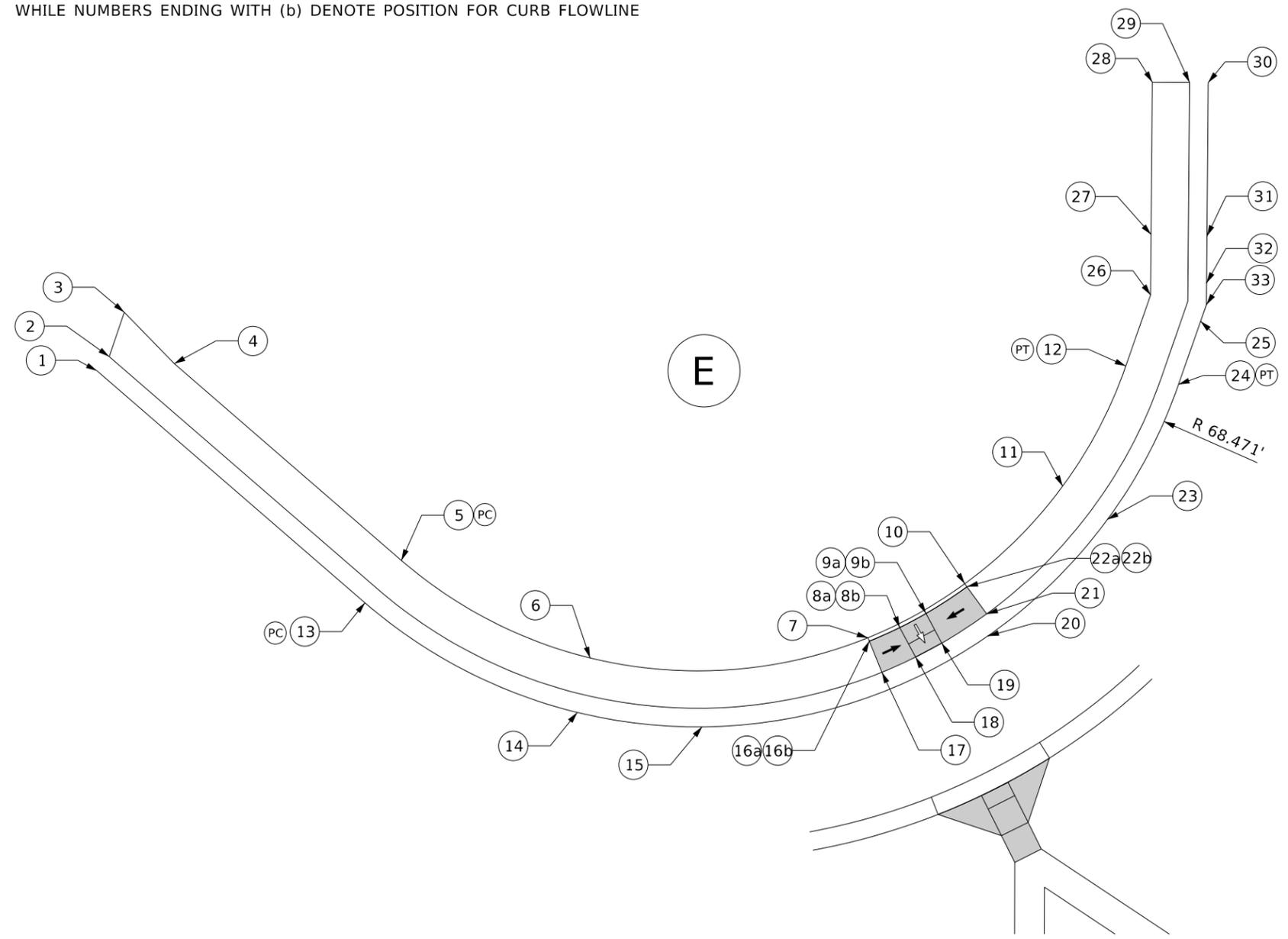
ENGLISH	
COUNTY	BONNEVILLE
KEY NUMBER	22008
SHEET	9 OF 61



**SYMBOL LEGEND**

- ← 1% TO 2% SLOPE
- ← 5% TO 8.3% RUNNING SLOPE,  
2% OR FLATTER CROSS SLOPE
- ← 10% OR FLATTER SLOPE

\*NOTE: NUMBERS ENDING WITH (a) DENOTE POSITION FOR CURB TOP  
WHILE NUMBERS ENDING WITH (b) DENOTE POSITION FOR CURB FLOWLINE



#	Northing	Easting	Elevation
1	672799.424'	691467.222'	4721.84'
2	672801.316'	691468.856'	4722.22'
3	672807.254'	691470.886'	4722.40'
4	672800.373'	691477.600'	4722.32'
(PC) 5	672774.004'	691508.145'	4722.46'
6	672760.926'	691533.521'	4722.55'
7	672763.642'	691570.870'	4723.81'
* 8a	672765.011'	691575.147'	4723.91'
* 8b	672765.002'	691575.152'	4723.52'
* 9a	672766.894'	691578.676'	4723.99'
* 9b	672766.886'	691578.681'	4723.59'
10	672770.875'	691583.887'	4724.13'
11	672783.952'	691597.045'	4724.94'
(PT) 12	672800.064'	691605.552'	4725.49'
(PC) 13	672768.327'	691503.244'	4722.00'
14	672753.629'	691531.789'	4722.10'
15	672751.688'	691548.582'	4722.88'
* 16a	672763.179'	691571.058'	4723.81'
* 16b	672763.170'	691571.062'	4723.81'
17	672759.011'	691572.755'	4723.73'
18	672761.042'	691577.272'	4723.45'
19	672762.926'	691580.802'	4723.53'
20	672763.872'	691586.979'	4723.64'
21	672766.836'	691586.834'	4724.07'
* 22a	672770.471'	691584.182'	4724.12'
* 22b	672770.463'	691584.188'	4724.11'
23	672779.481'	691603.067'	4724.50'
(PT) 24	672797.592'	691612.633'	4725.04'
25	672806.059'	691615.588'	4725.27'
26	672809.582'	691608.874'	4725.77'
27	672817.670'	691608.944'	4726.03'
28	672838.111'	691609.120'	4727.07'
29	672838.068'	691614.120'	4726.84'
30	672838.047'	691616.620'	4726.47'
31	672817.460'	691616.443'	4725.57'
32	672811.171'	691616.388'	4725.41'
33	672808.280'	691616.364'	4725.33'

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	J. BELL
DESIGN CHECKED	B. BURKE
DETAILED	A. HUNTSMAN
DRAWING CHECKED	J. ALLEN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME  
22008\_CRD\_Sht.DGN

DRAWING DATE:  
22-JAN-2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

**Horrocks.**

PROJECT NO.  
**A022(008)**

CURB DETAIL SHEET

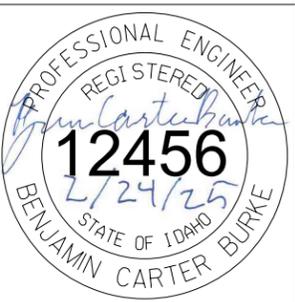
**NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS**

**ENGLISH**

COUNTY BONNEVILLE

KEY NUMBER 22008

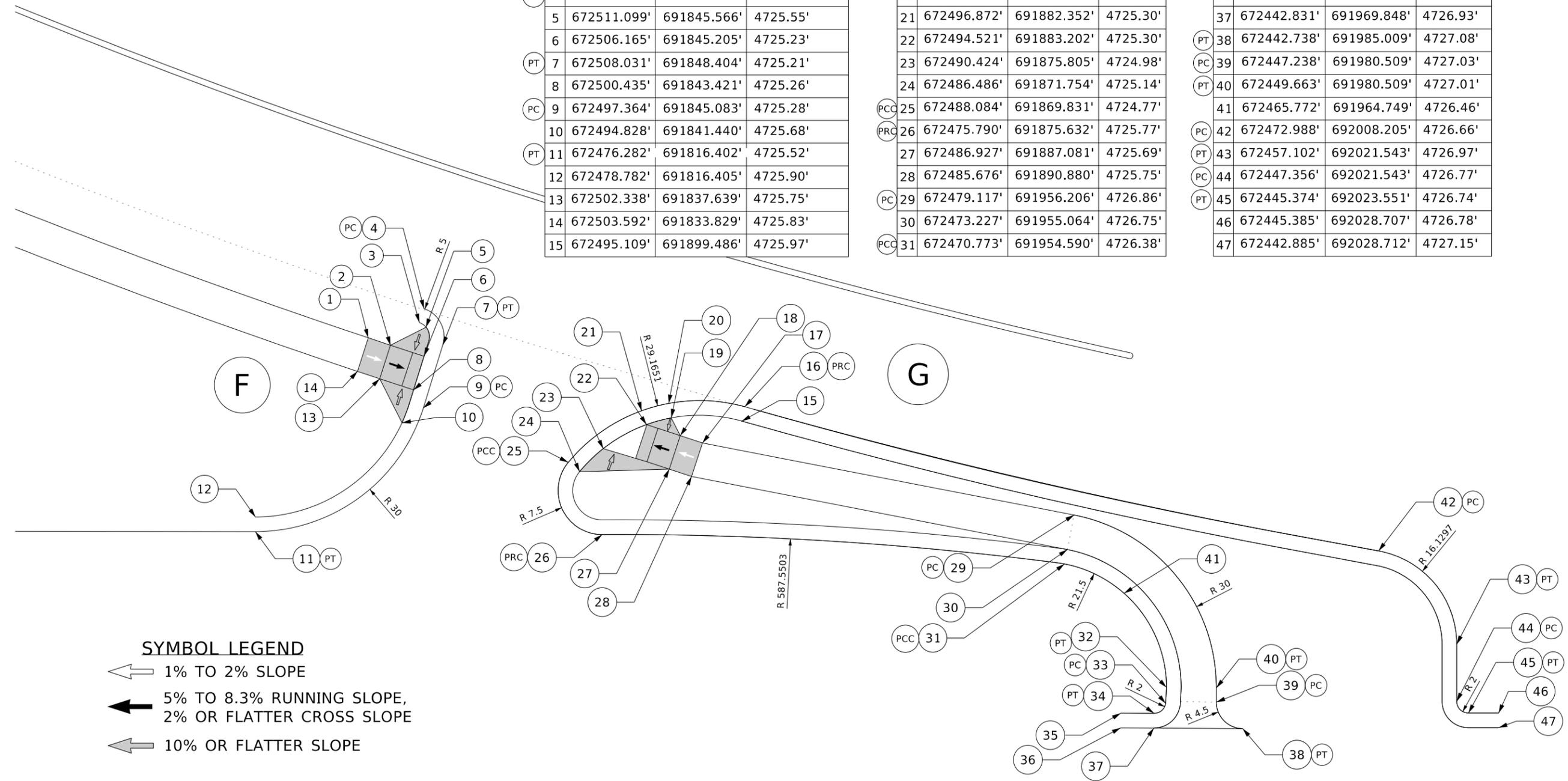
SHEET 10 OF 61



#	Northing	Easting	Elevation
1	672509.299'	691835.681'	4725.79'
2	672508.025'	691839.473'	4725.71'
3	672511.893'	691844.407'	4725.53'
PC 4	672514.270'	691845.184'	4725.16'
5	672511.099'	691845.566'	4725.55'
6	672506.165'	691845.205'	4725.23'
PT 7	672508.031'	691848.404'	4725.21'
8	672500.435'	691843.421'	4725.26'
PC 9	672497.364'	691845.083'	4725.28'
10	672494.828'	691841.440'	4725.68'
PT 11	672476.282'	691816.402'	4725.52'
12	672478.782'	691816.405'	4725.90'
13	672502.338'	691837.639'	4725.75'
14	672503.592'	691833.829'	4725.83'
15	672495.109'	691899.486'	4725.97'

PRC 16	672497.566'	691899.984'	4725.60'
17	672491.381'	691892.759'	4725.79'
18	672492.626'	691888.957'	4725.73'
19	672495.664'	691887.424'	4725.71'
20	672498.123'	691886.970'	4725.34'
21	672496.872'	691882.352'	4725.30'
22	672494.521'	691883.202'	4725.30'
23	672490.424'	691875.805'	4724.98'
24	672486.486'	691871.754'	4725.14'
PCC 25	672488.084'	691869.831'	4724.77'
PRC 26	672475.790'	691875.632'	4725.77'
27	672486.927'	691887.081'	4725.69'
28	672485.676'	691890.880'	4725.75'
PC 29	672479.117'	691956.206'	4726.86'
30	672473.227'	691955.064'	4726.75'
PCC 31	672470.773'	691954.590'	4726.38'

PT 32	672449.736'	691972.009'	4726.53'
PC 33	672447.032'	691971.847'	4726.54'
PT 34	672445.331'	691969.860'	4726.55'
35	672445.358'	691964.177'	4726.57'
36	672442.858'	691964.165'	4726.95'
37	672442.831'	691969.848'	4726.93'
PT 38	672442.738'	691985.009'	4727.08'
PC 39	672447.238'	691980.509'	4727.03'
PT 40	672449.663'	691980.509'	4727.01'
41	672465.772'	691964.749'	4726.46'
PC 42	672472.988'	692008.205'	4726.66'
PT 43	672457.102'	692021.543'	4726.97'
PC 44	672447.356'	692021.543'	4726.77'
PT 45	672445.374'	692023.551'	4726.74'
46	672445.385'	692028.707'	4726.78'
47	672442.885'	692028.712'	4727.15'



**SYMBOL LEGEND**

↔ 1% TO 2% SLOPE

↔ 5% TO 8.3% RUNNING SLOPE,  
2% OR FLATTER CROSS SLOPE

↔ 10% OR FLATTER SLOPE

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	J. BELL
DESIGN CHECKED	B. BURKE
DETAILED	A. HUNTSMAN
DRAWING CHECKED	J. ALLEN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME  
22008 CRD Sht.DGN

DRAWING DATE:  
22-JAN-2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety → YOUR Mobility → YOUR Economic Opportunity

**Horrocks.**

PROJECT NO.  
**A022(008)**

CURB DETAIL SHEET

**NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS**

**ENGLISH**

COUNTY BONNEVILLE

KEY NUMBER 22008

SHEET 11 OF 61

#	Northing	Easting	Elevation
1	672513.088'	691646.867'	4725.68'
2	672515.522'	691641.381'	4725.59'
3	672514.291'	691633.187'	4724.46'
4	672513.639'	691635.600'	4724.84'
5	672490.490'	691636.753'	4724.75'
6	672483.722'	691646.684'	4725.08'
7	672481.240'	691651.191'	4724.68'
8	672476.474'	691661.331'	4724.64'
9	672476.470'	691664.887'	4724.63'
10	672476.461'	691673.046'	4724.72'
11	672478.961'	691673.048'	4725.09'
12	672479.044'	691660.038'	4725.02'
13	672479.917'	691654.966'	4724.67'
14	672485.511'	691656.925'	4725.13'
15	672490.473'	691661.414'	4725.15'
16	672490.701'	691658.743'	4725.19'
17	672491.862'	691654.912'	4725.26'
18	672486.834'	691653.150'	4725.17'
19	672486.442'	691652.336'	4725.17'
20	672442.921'	691654.803'	4725.06'
21	672442.943'	691649.803'	4725.04'

22	672440.981'	691649.803'	4725.07'
*23a	672438.895'	691649.803'	4725.45'
*23b	672438.905'	691649.803'	4725.10'
24	672438.395'	691649.803'	4725.45'
25	672445.501'	691636.527'	4725.00'
26	672443.001'	691636.516'	4725.37'
27	672438.413'	691636.495'	4725.55'
28	672442.969'	691643.803'	4725.40'
*29a	672438.885'	691643.801'	4725.46'
*29b	672438.895'	691643.801'	4725.46'
30	672438.385'	691643.801'	4725.46'
31	672438.385'	691644.011'	4725.46'
32	672438.403'	691655.025'	4725.44'
33	672438.412'	691660.801'	4725.48'
*34a	672438.912'	691660.801'	4725.48'
*34b	672438.922'	691660.801'	4725.48'
35	672438.442'	691679.569'	4725.59'
36	672443.099'	691679.609'	4725.52'
37	672445.599'	691679.572'	4725.15'
38	672442.818'	691660.899'	4725.46'
39	672438.403'	691654.801'	4725.44'

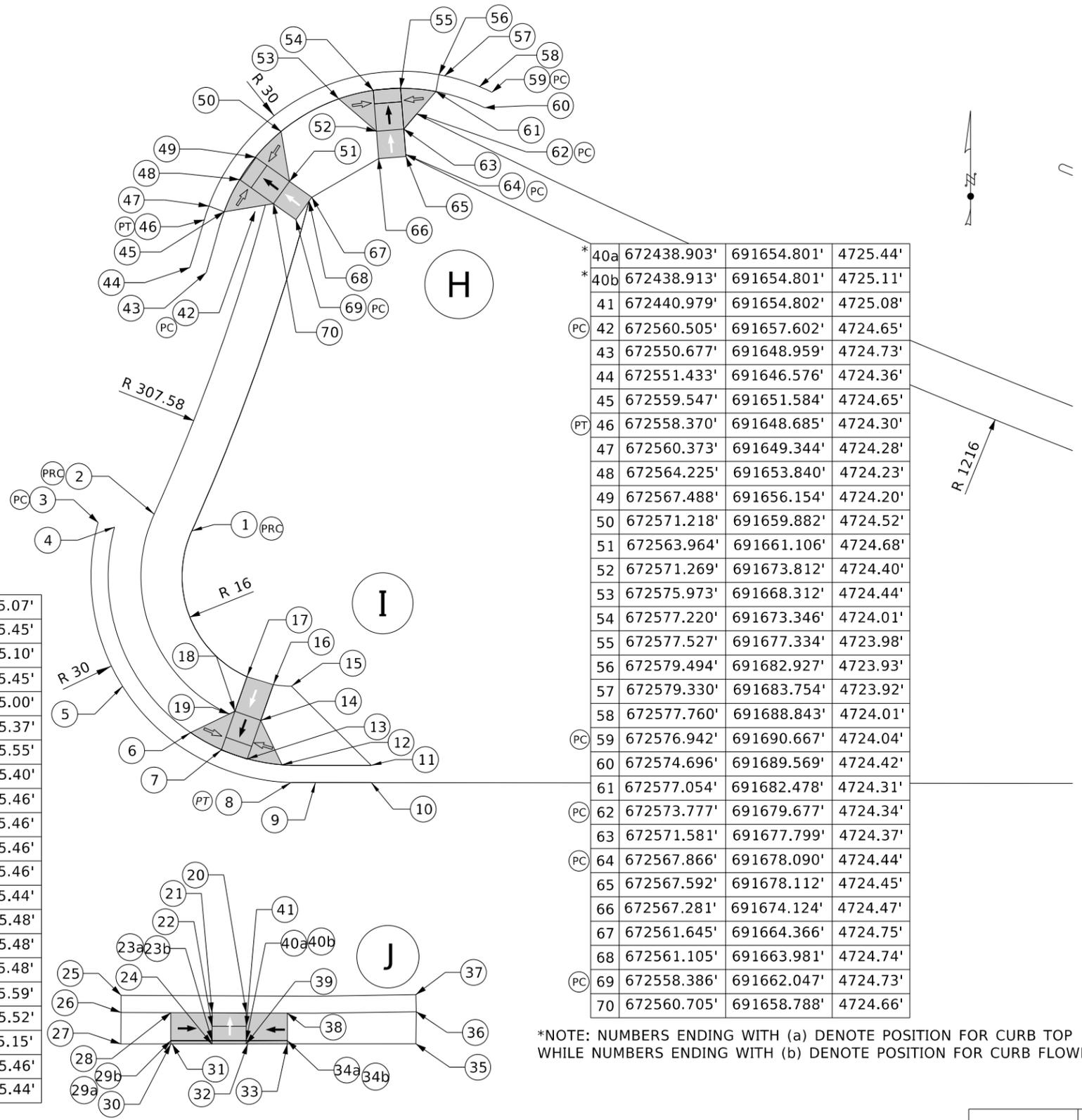
*40a	672438.903'	691654.801'	4725.44'
*40b	672438.913'	691654.801'	4725.11'
41	672440.979'	691654.802'	4725.08'
42	672560.505'	691657.602'	4724.65'
43	672550.677'	691648.959'	4724.73'
44	672551.433'	691646.576'	4724.36'
45	672559.547'	691651.584'	4724.65'
46	672558.370'	691648.685'	4724.30'
47	672560.373'	691649.344'	4724.28'
48	672564.225'	691653.840'	4724.23'
49	672567.488'	691656.154'	4724.20'
50	672571.218'	691659.882'	4724.52'
51	672563.964'	691661.106'	4724.68'
52	672571.269'	691673.812'	4724.40'
53	672575.973'	691668.312'	4724.44'
54	672577.220'	691673.346'	4724.01'
55	672577.527'	691677.334'	4723.98'
56	672579.494'	691682.927'	4723.93'
57	672579.330'	691683.754'	4723.92'
58	672577.760'	691688.843'	4724.01'
59	672576.942'	691690.667'	4724.04'
60	672574.696'	691689.569'	4724.42'
61	672577.054'	691682.478'	4724.31'
62	672573.777'	691679.677'	4724.34'
63	672571.581'	691677.799'	4724.37'
64	672567.866'	691678.090'	4724.44'
65	672567.592'	691678.112'	4724.45'
66	672567.281'	691674.124'	4724.47'
67	672561.645'	691664.366'	4724.75'
68	672561.105'	691663.981'	4724.74'
69	672558.386'	691662.047'	4724.73'
70	672560.705'	691658.788'	4724.66'

**SYMBOL LEGEND**

↗ 1% TO 2% SLOPE

↖ 5% TO 8.3% RUNNING SLOPE,  
2% OR FLATTER CROSS SLOPE

↘ 10% OR FLATTER SLOPE



\*NOTE: NUMBERS ENDING WITH (a) DENOTE POSITION FOR CURB TOP WHILE NUMBERS ENDING WITH (b) DENOTE POSITION FOR CURB FLOWLINE

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	J. BELL
DESIGN CHECKED	B. BURKE
DETAILED	A. HUNTSMAN
DRAWING CHECKED	J. ALLEN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 22008 CRD Sht.DGN

DRAWING DATE: 22-JAN-2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety → YOUR Mobility → YOUR Economic Opportunity

**Horrocks.**

PROJECT NO. A022(008)

CURB DETAIL SHEET

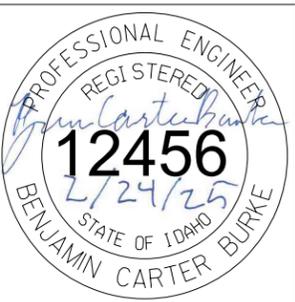
NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS

ENGLISH

COUNTY BONNEVILLE

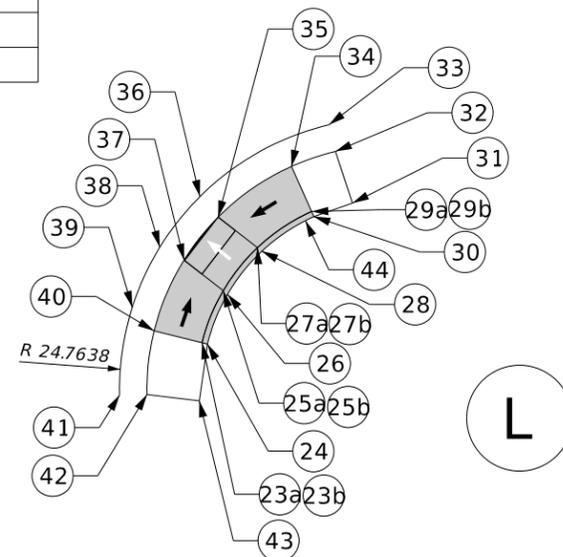
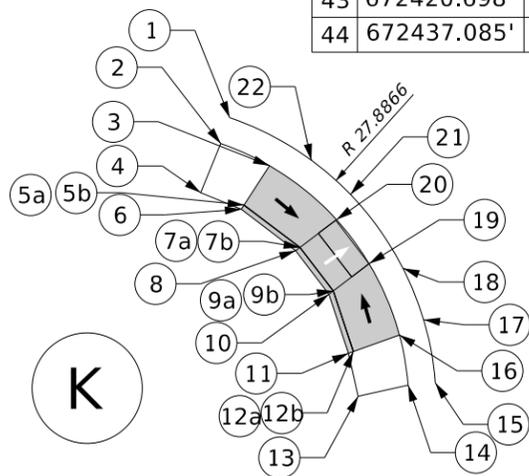
KEY NUMBER 22008

SHEET 12 OF 61



#	Northing	Easting	Elevation
1	672443.734'	692277.457'	4727.81'
2	672441.368'	692276.648'	4728.18'
3	672439.349'	692281.100'	4728.16'
4	672436.907'	692274.825'	4728.14'
*5a	672435.767'	692278.771'	4728.14'
*5b	672435.776'	692278.777'	4728.14'
6	672435.394'	692278.528'	4728.14'
*7a	672431.922'	692283.882'	4728.12'
*7b	672431.928'	692283.890'	4727.79'
8	672431.625'	692283.491'	4728.12'
*9a	672427.951'	692286.917'	4728.12'
*9b	672427.957'	692286.926'	4727.79'
10	672427.654'	692286.529'	4728.12'
11	672422.280'	692288.301'	4728.11'
*12a	672422.443'	692288.750'	4728.11'
*12b	672422.446'	692288.759'	4728.11'
13	672418.377'	692289.177'	4728.02'
14	672419.402'	692293.739'	4728.06'
15	672419.604'	692296.231'	4727.69'
16	672423.964'	692292.945'	4728.08'
17	672425.339'	692295.153'	4727.77'
18	672430.025'	692293.274'	4727.72'
19	672430.447'	692290.181'	4727.72'
20	672434.443'	692287.203'	4727.73'
21	672436.741'	692288.474'	4727.73'
22	672439.833'	692284.929'	4727.84'

#	Northing	Easting	Elevation
*23a	672425.973'	692349.814'	4728.30'
*23b	672425.976'	692349.804'	4728.30'
24	672425.853'	692350.299'	4728.30'
*25a	672430.710'	692351.750'	4728.39'
*25b	672430.716'	692351.742'	4727.96'
26	672430.401'	692352.148'	4728.39'
*27a	672434.618'	692354.869'	4728.48'
*27b	672434.624'	692354.861'	4728.02'
28	672434.308'	692355.269'	4728.48'
*29a	672437.912'	692359.812'	4728.60'
*29b	672437.922'	692359.808'	4728.60'
30	672437.456'	692360.016'	4728.60'
31	672438.688'	692363.533'	4728.73'
32	672443.369'	692361.975'	4728.62'
33	672445.803'	692361.404'	4728.25'
34	672442.021'	692357.977'	4728.53'
35	672437.404'	692351.280'	4727.97'
36	672439.276'	692349.617'	4727.97'
37	672433.487'	692348.171'	4727.89'
38	672434.672'	692345.965'	4727.89'
39	672429.188'	692343.452'	4727.87'
40	672427.058'	692345.447'	4728.24'
41	672421.229'	692342.295'	4727.84'
42	672421.276'	692344.794'	4728.22'
43	672420.698'	692349.565'	4728.27'
44	672437.085'	692359.237'	4728.57'



**SYMBOL LEGEND**

- 1% TO 2% SLOPE
- 5% TO 8.3% RUNNING SLOPE,  
2% OR FLATTER CROSS SLOPE
- 10% OR FLATTER SLOPE

\*NOTE: NUMBERS ENDING WITH (a) DENOTE POSITION FOR CURB TOP WHILE NUMBERS ENDING WITH (b) DENOTE POSITION FOR CURB FLOWLINE

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED J. BELL	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  CADD FILE NAME 22008 CRD Sht.DGN  DRAWING DATE: 22-JAN-2025
DESIGN CHECKED B. BURKE	
DETAILED A. HUNTSMAN	
DRAWING CHECKED J. Allen	

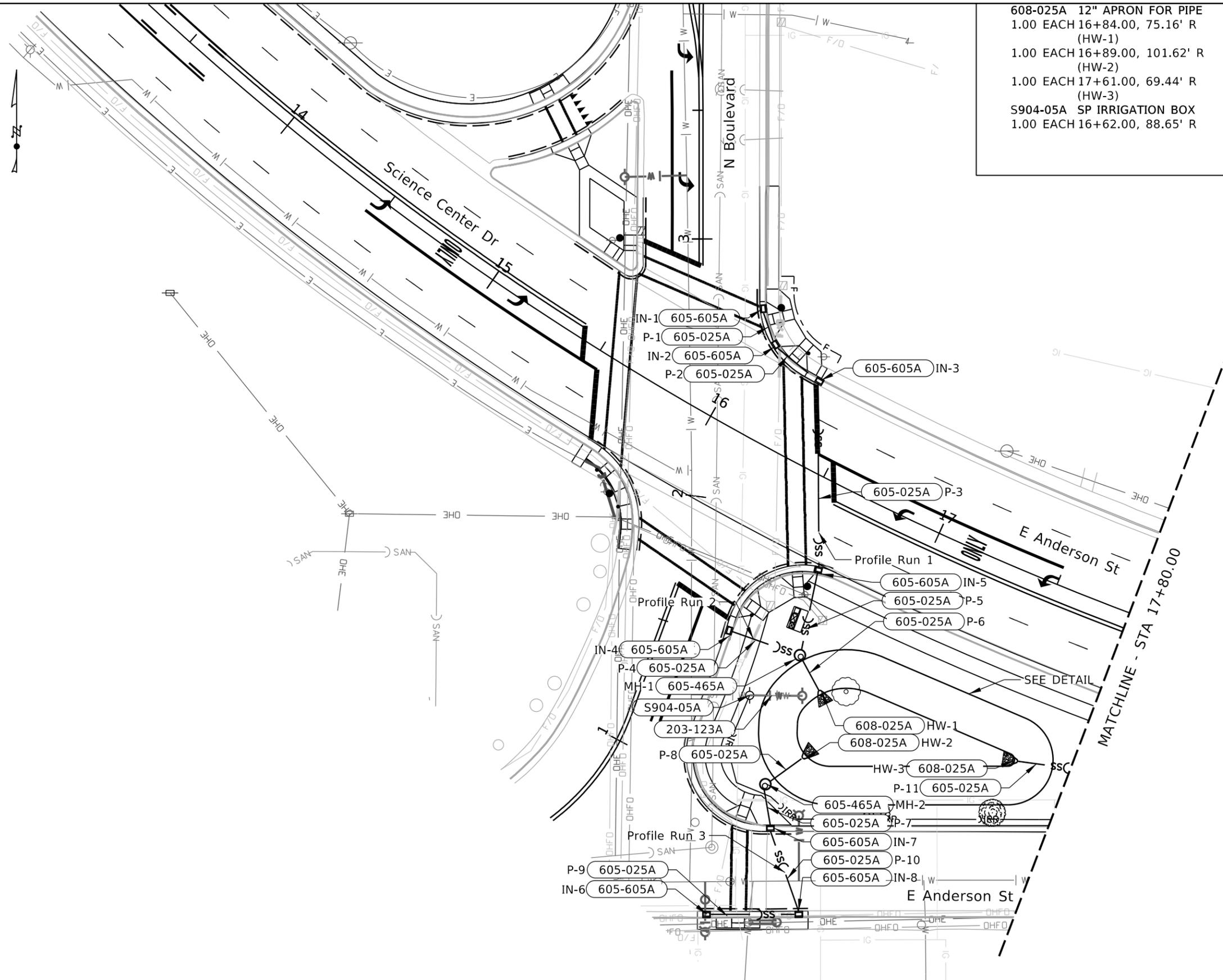
**IDAHO TRANSPORTATION DEPARTMENT**  
 YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

PROJECT NO.	A022(008)
-------------	-----------

CURB DETAIL SHEET  
**NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS**

<b>ENGLISH</b>	
COUNTY	BONNEVILLE
KEY NUMBER	22008
SHEET	13 OF 61





- 608-025A 12" APRON FOR PIPE  
1.00 EACH 16+84.00, 75.16' R (HW-1)
- 1.00 EACH 16+89.00, 101.62' R (HW-2)
- 1.00 EACH 17+61.00, 69.44' R (HW-3)
- S904-05A SP IRRIGATION BOX  
1.00 EACH 16+62.00, 88.65' R

- 203-123A REMOVAL OF MISCELLANEOUS ITEM (WATERLINE & VALVE)  
21.00 FT 16+62.00, 88.65' R - 16+79.25, 79.80' R
- 605-025A 12" STORM SEWER PIPE  
13.00 FT 15+97.77, 45.45' L - 16+07.20, 37.33' L (P-1)
- 20.00 FT 16+09.65, 35.97' L - 16+29.74, 32.40' L (P-2)
- 73.00 FT 16+31.00, 31.61' L - 16+63.98, 32.40' R (P-3)
- 27.00 FT 16+45.29, 69.66' R - 16+70.15, 66.33' R (P-4)
- 32.00 FT 16+64.24, 33.79' R - 16+71.71, 64.03' R (P-5)
- 14.00 FT 16+73.55, 67.17' R - 16+84.00, 75.16' R (P-6)
- 15.00 FT 16+81.34, 118.96' R - 16+88.95, 130.97' R (P-7)
- 16.00 FT 16+82.02, 115.34' R - 16+88.98, 101.61' R (P-8)
- 34.00 FT 16+83.02, 172.08' R - 17+09.61, 157.98' R (P-9)
- 34.00 FT 16+89.45, 132.27' R - 17+10.34, 156.85' R (P-10)
- 21.00 FT 17+61.02, 69.47' R - 17+80.00, 64.67' R (P-11)
- 605-465A MANHOLE TYPE C (MH-1)  
1.00 EACH 16+72.00, 66.00' R (MH-1)
- 1.00 EACH 16+81.00, 117.00' R (MH-2)
- 605-605A INLET TYPE 1 (IN-1)  
1.00 EACH 15+98.25, 47.14' L (IN-1)
- 1.00 EACH 16+09.18, 37.71' L (IN-2)
- 1.00 EACH 16+31.05, 33.57' L (IN-3)
- 1.00 EACH 16+45.80, 69.57' R (IN-4)
- 1.00 EACH 16+64.37, 34.32' R (IN-5)
- 1.00 EACH 16+82.50, 173.74' R (IN-6)
- 1.00 EACH 16+88.72, 130.49' R (IN-7)
- 1.00 EACH 17+11.05, 158.62' R (IN-8)

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED B. SCHELLENBERG	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED K. KAUER	CADD FILE NAME 22008 DRAN 001.DGN
DETAILED B. SCHELLENBERG	DRAWING DATE: June 30, 2025
DRAWING CHECKED K. KAUER	

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety → YOUR Mobility → YOUR Economic Opportunity

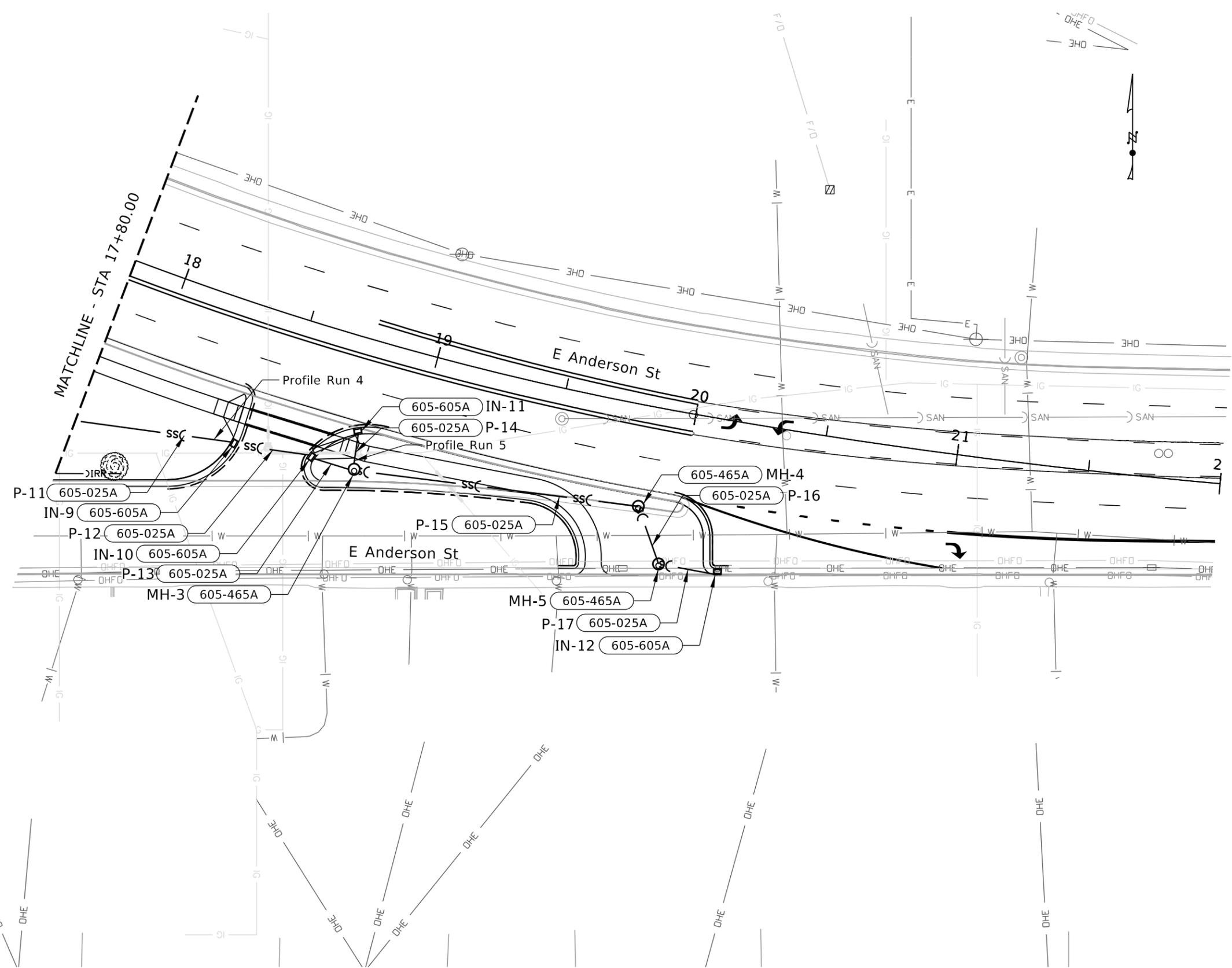
**Horrocks.**

PROJECT NO.  
**A022(008)**

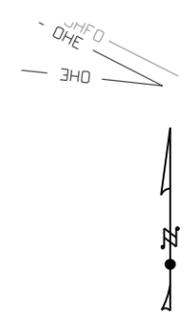
DRAINAGE PLAN SHEET  
**NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS**

**ENGLISH**  
COUNTY **BONNEVILLE**  
KEY NUMBER **22008**  
SHEET **14** OF **61**





605-025A	12" STORM SEWER PIPE
60.00 FT	17+80.00, 64.67' R - 18+36.00, 52.73' R (P-11)
29.00 FT	18+37.33, 52.99' R - 18+64.26, 48.72' R (P-12)
15.00 FT	18+65.50, 49.29' R - 18+79.18, 49.61' R (P-13)
12.00 FT	18+78.82, 35.46' R - 18+80.43, 47.09' R (P-14)
105.00 FT	18+82.92, 49.18' R - 19+83.08, 38.12' R (P-15)
20.00 FT	19+86.45, 39.34' R - 19+95.06, 56.27' R (P-16)
20.00 FT	19+97.85, 58.53' R - 20+16.60, 57.25' R (P-17)
605-465A	MANHOLE TYPE C
1.00 EACH	18+81.00, 49.00' R (MH-3)
1.00 EACH	19+85.00, 38.00' R (MH-4)
1.00 EACH	19+96.00, 58.00' R (MH-5)
605-605A	INLET TYPE 1
1.00 EACH	18+35.50, 52.60' R (IN-9)
1.00 EACH	18+66.00, 49.41' R (IN-10)
1.00 EACH	18+79.00, 35.93' R (IN-11)
1.00 EACH	20+18.00, 58.27' R (IN-12)



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	B. SCHELLENBERG
DESIGN CHECKED	K. KAUER
DETAILED	B. SCHELLENBERG
DRAWING CHECKED	K. KAUER

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME  
22008 DRAN 001.DGN

DRAWING DATE:  
January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety → YOUR Mobility → YOUR Economic Opportunity

**Horrocks.**

PROJECT NO.  
**A022(008)**

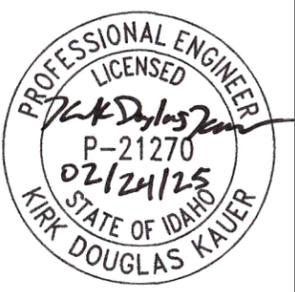
DRAINAGE PLAN SHEET  
**NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS**

**ENGLISH**

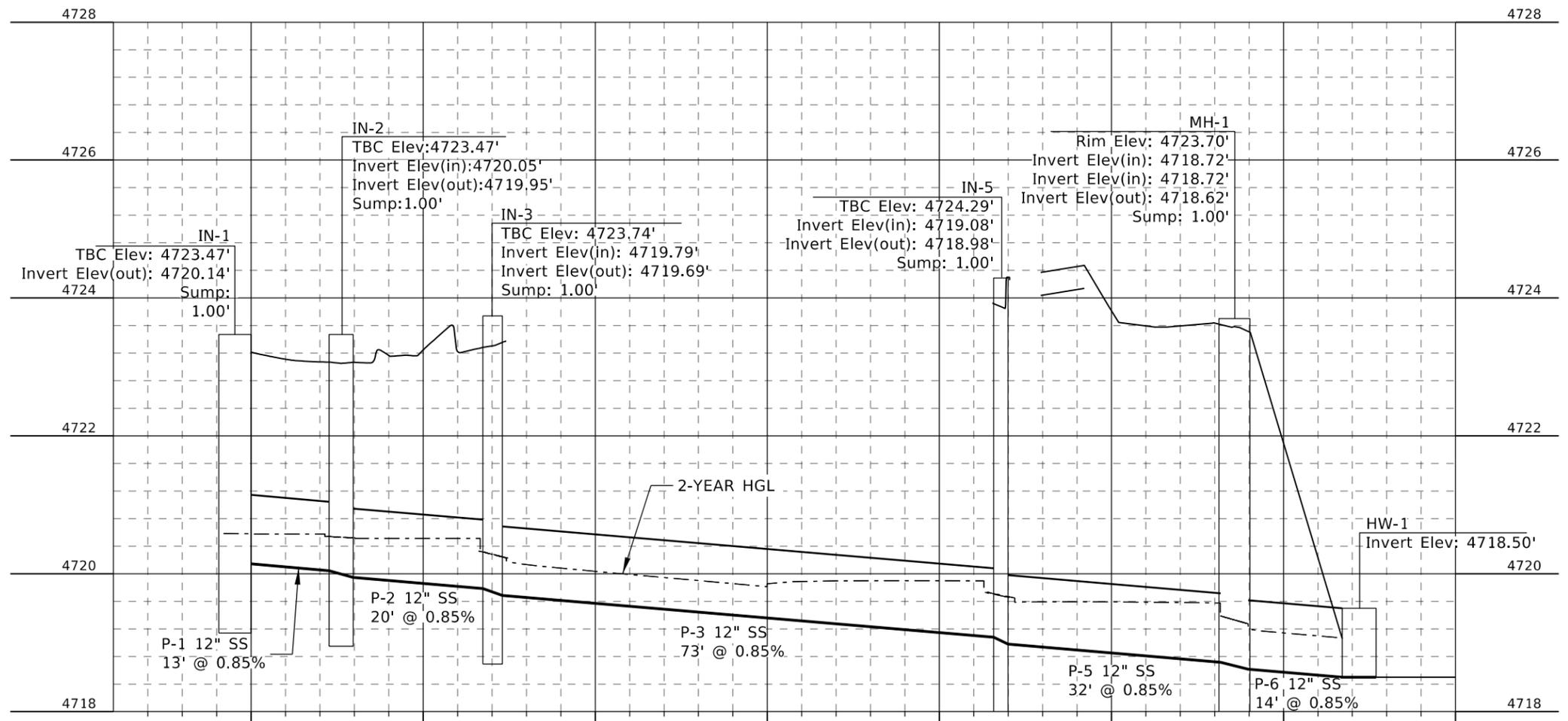
COUNTY **BONNEVILLE**

KEY NUMBER **22008**

SHEET **15** OF **61**



PROFILE RUN 1



REVISIONS			
NO.	DATE	BY	DESCRIPTION

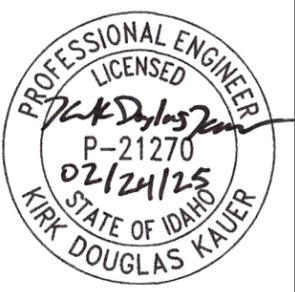
DESIGNED B. Schellenberg	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  CADD FILE NAME 22008 DRAN 001.DGN  DRAWING DATE: January 22, 2025
DESIGN CHECKED K. Kauer	
DETAILED B. Schellenberg	
DRAWING CHECKED K. Kauer	

**IDAHO TRANSPORTATION DEPARTMENT**  
 YOUR Safety → YOUR Mobility → YOUR Economic Opportunity  

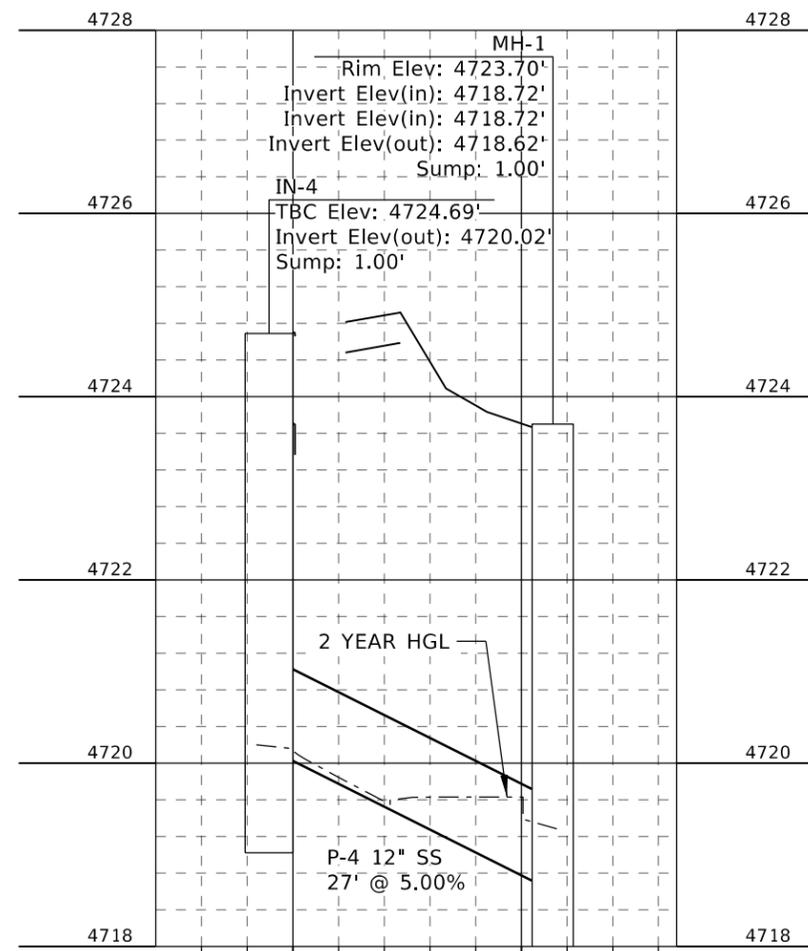

PROJECT NO.  A022(008)
------------------------------

DRAINAGE PROFILE SHEET  
**NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS**

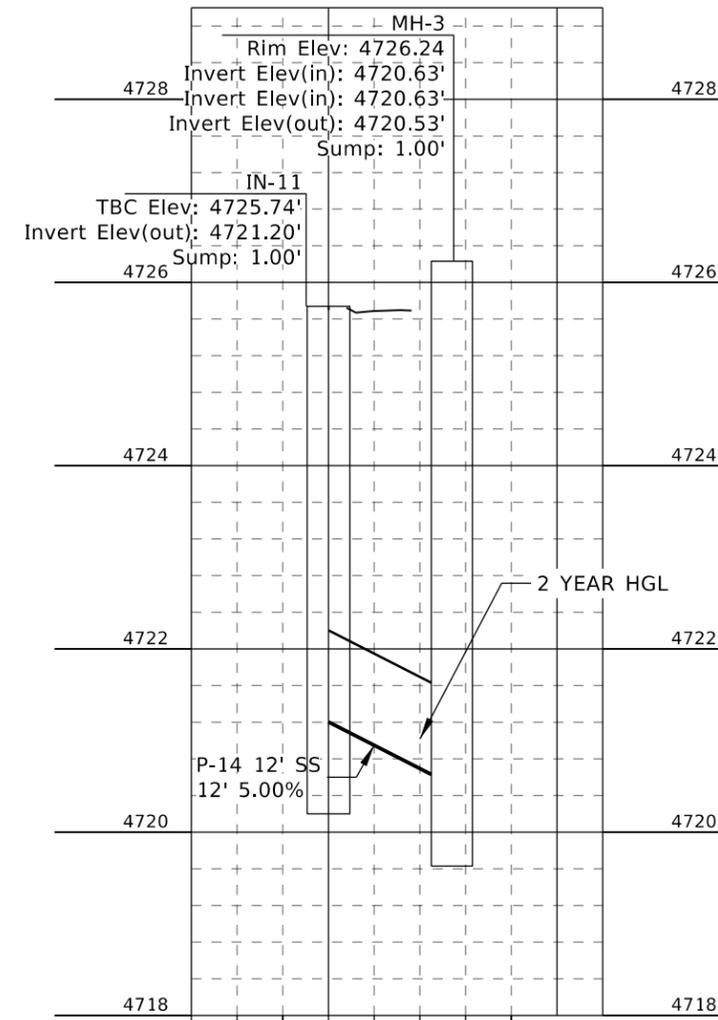
<b>ENGLISH</b>
COUNTY BONNEVILLE
KEY NUMBER 22008
SHEET 16 OF 61



PROFILE RUN 2



PROFILE RUN 5



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED B. Schellenberg	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED K. Kauer	
DETAILED B. Schellenberg	CADD FILE NAME 22008 DRAN 001.DGN
DRAWING CHECKED K. Kauer	DRAWING DATE: January 22, 2025

**IDAHO**  
**TRANSPORTATION**  
**DEPARTMENT**

YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

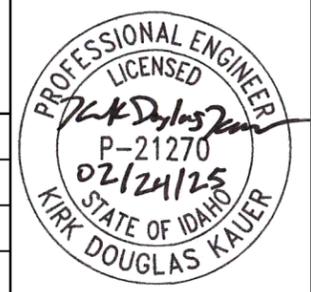
**Horrocks.**

PROJECT NO.	A022(008)
-------------	-----------

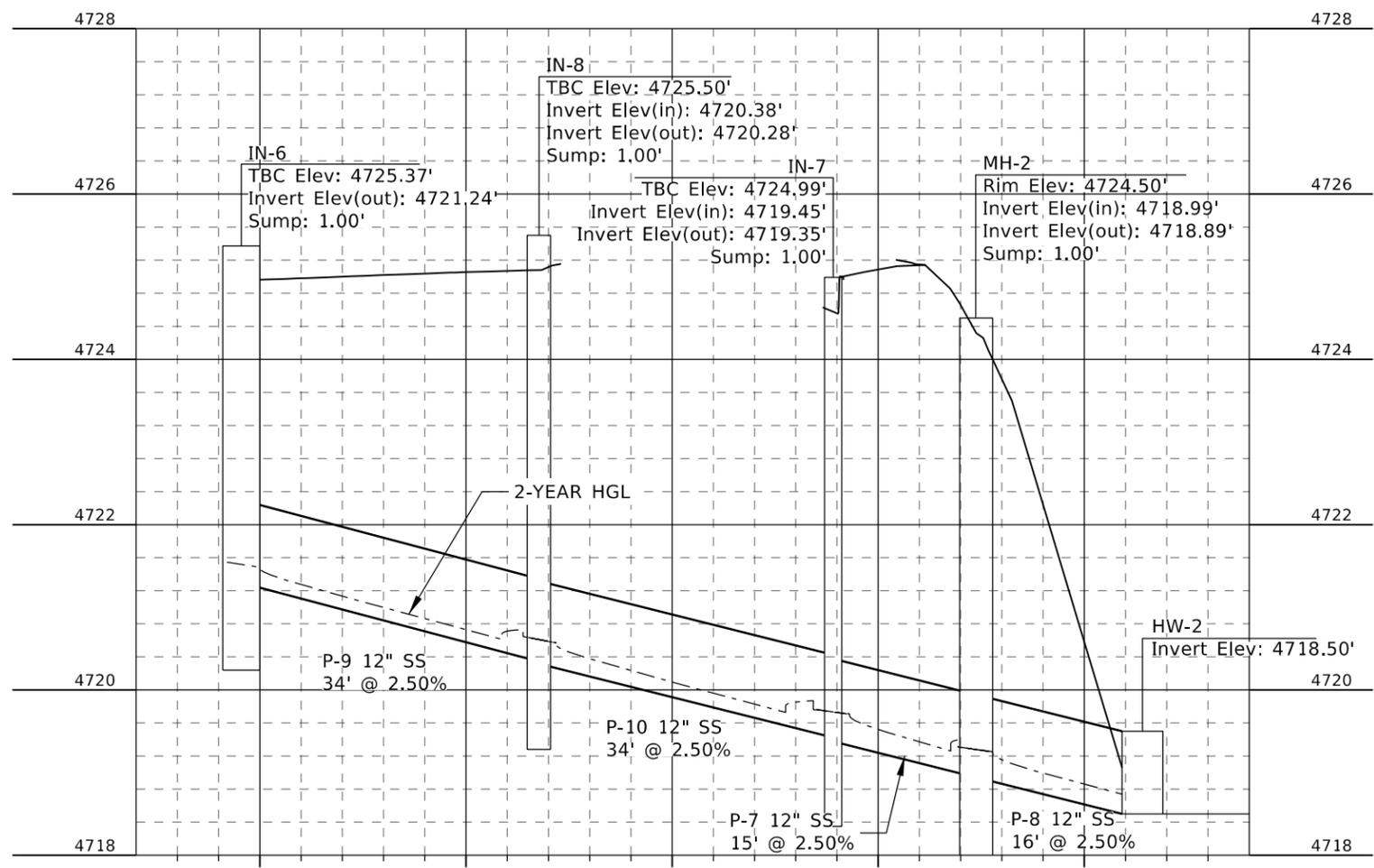
DRAINAGE PROFILE SHEET

**NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS**

<b>ENGLISH</b>	
COUNTY	BONNEVILLE
KEY NUMBER	22008
SHEET 17 OF 61	



PROFILE RUN 3



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED B. Schellenberg	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED K. Kauer	
DETAILED B. Schellenberg	CADD FILE NAME 22008 DRAN 001.DGN
DRAWING CHECKED K. Kauer	DRAWING DATE: January 22, 2025

**IDAHO  
TRANSPORTATION  
DEPARTMENT**

YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

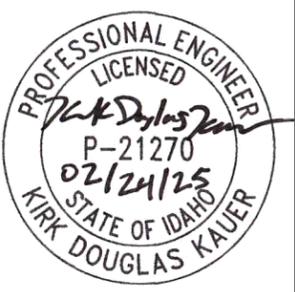
**Horrocks.**

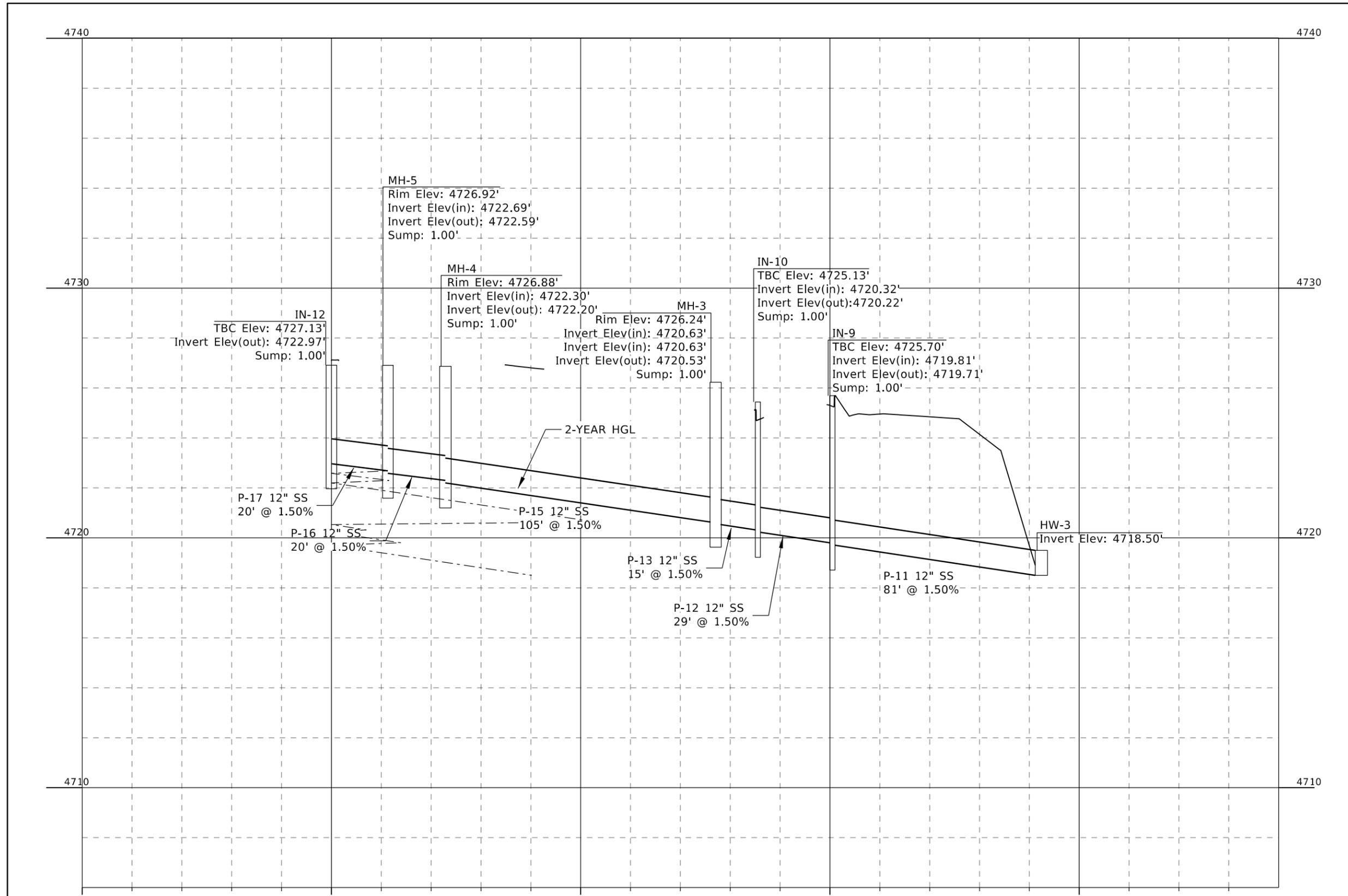
PROJECT NO.  A022(008)
------------------------------

DRAINAGE PROFILE SHEET

**NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS**

<b>ENGLISH</b>
COUNTY BONNEVILLE
KEY NUMBER 22008
SHEET 18 OF 61





REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED B. Schellenberg	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  CADD FILE NAME 22008 DRAN 001.DGN  DRAWING DATE: January 22, 2025
DESIGN CHECKED K. Kauer	
DETAILED B. Schellenberg	
DRAWING CHECKED K. Kauer	

**IDAHO**  
**TRANSPORTATION**  
**DEPARTMENT**  
YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

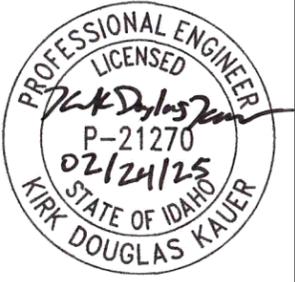


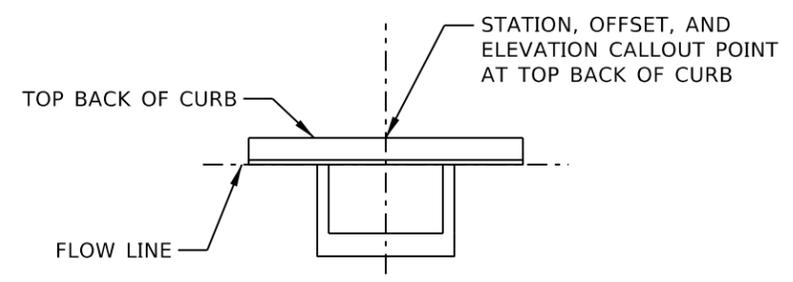
**Horrocks.**

PROJECT NO.	A022(008)
-------------	-----------

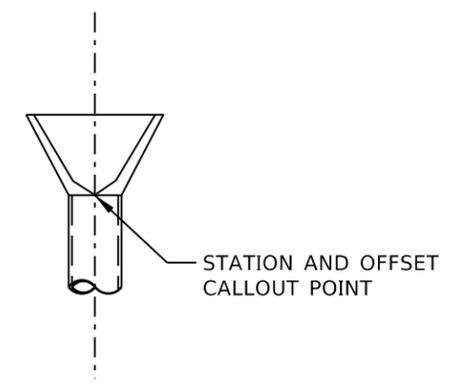
DRAINAGE PROFILE SHEET  
**NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS**

ENGLISH	
COUNTY	BONNEVILLE
KEY NUMBER	22008
SHEET 19 OF 61	

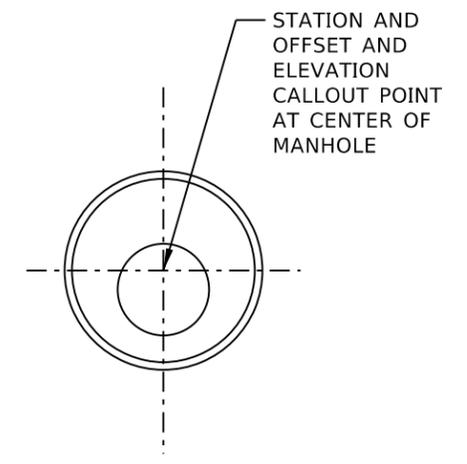




PLAN  
605-605A  
INLET TYPE 1

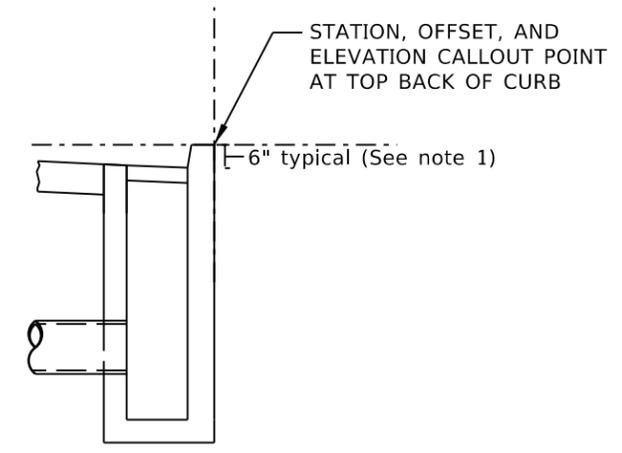


PLAN  
608-025A  
12" APRON FOR PIPE

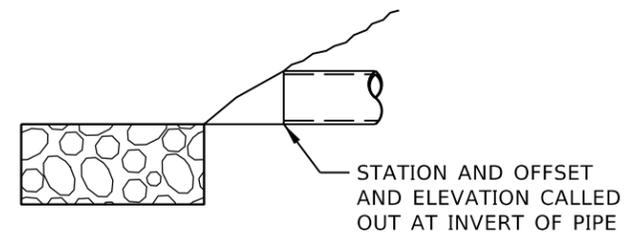


PLAN  
605-465A  
MANHOLE TYPE C

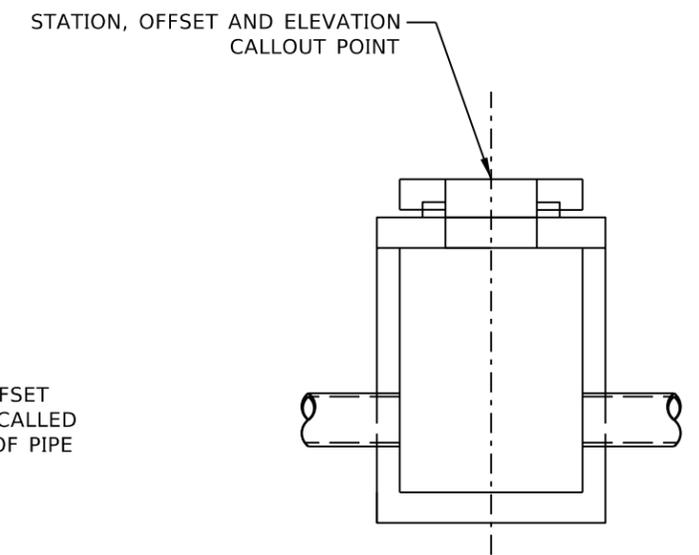
**Notes:**  
1. In areas where inlet boxes are within ramp transitions modify structure as needed. Inlet grate must sit flush with gutter flowline.



PROFILE  
605-605A  
INLET TYPE 1



PROFILE  
608-025A  
12" APRON FOR PIPE



PROFILE  
605-465A  
MANHOLE TYPE C

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED B SCHELLENBERG  
DESIGN CHECKED K. KAUER  
DETAILED B SCHELLENBERG  
DRAWING CHECKED K KAUER

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
CADD FILE NAME 22008 DRAN 002.DGN  
DRAWING DATE: January 22, 2025

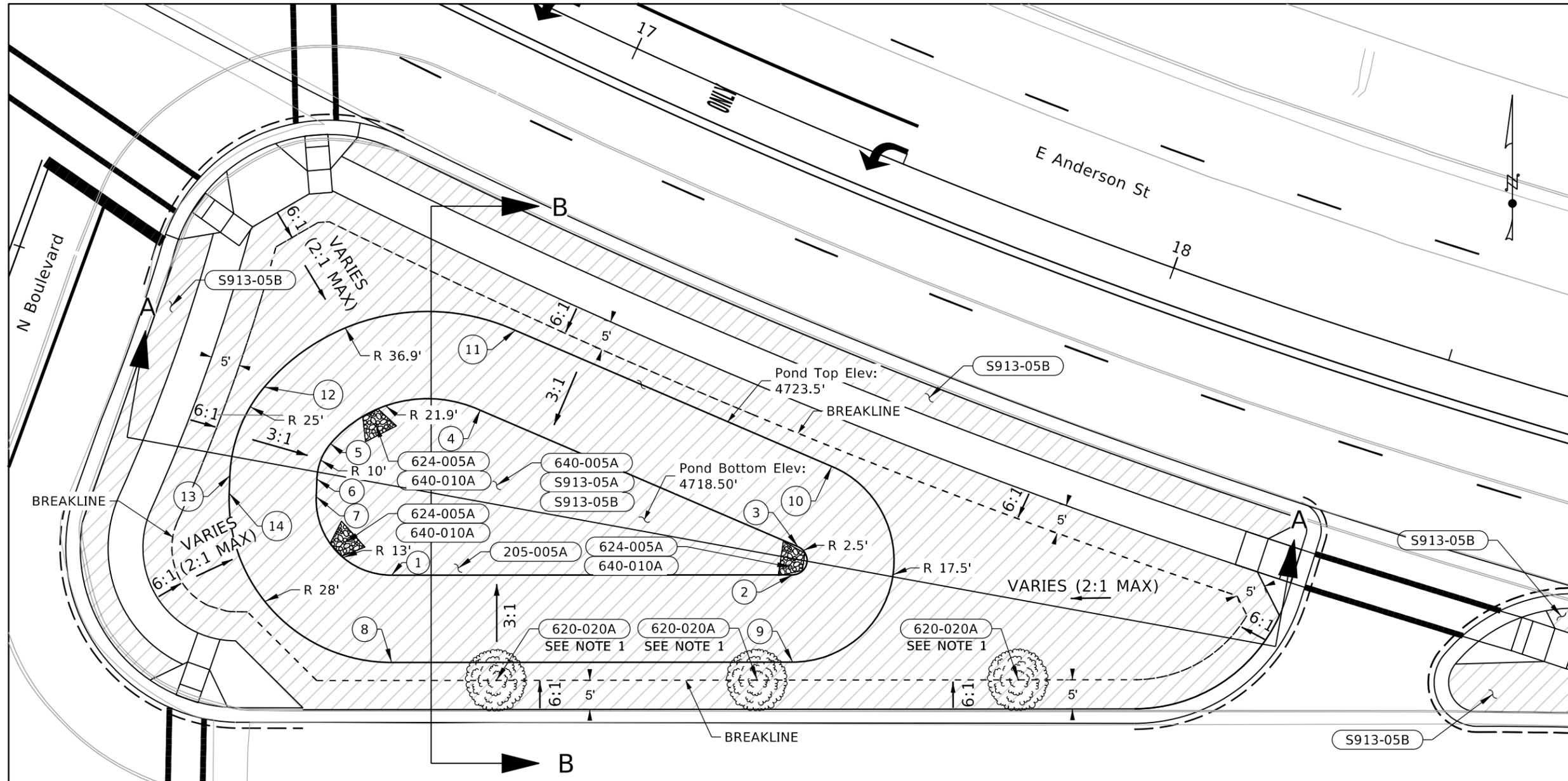
**IDAHO TRANSPORTATION DEPARTMENT**  
  
 YOUR Safety→YOUR Mobility→YOUR Economic Opportunity  


PROJECT NO.  
A022(008)

**DRAINAGE DETAIL SHEET**  
NHS-7046, SCIENCE CENTER;  
N BLVD TO HOMES,  
IDAHO FALLS

**ENGLISH**  
COUNTY BONNEVILLE  
KEY NUMBER 22008  
SHEET 20 OF 61

**PROFESSIONAL ENGINEER LICENSED**  
  
 P-21270  
 02/24/25  
 KIRK DOUGLAS KAUER  
 STATE OF IDAHO



- 205-005A EXCAVATION  
1500 CY (POND AREA)
- 620-020A PLANTING TREE (SEEDLING or CONTAINER)
  - 1 EA 17+21.23, 109.07' R
  - 1 EA 17+59.47, 91.70' R
  - 1 EA 17+98.76, 75.70' R
- 624-005A LOOSE RIPRAP (D50=6")
  - 1.33 CY 16+86.70, 77.69' R
  - 1.33 CY 16+90.50, 98.23' R
  - 1.33 CY 16+57.54, 70.41' R
- 640-005A DRAINAGE GEOTEXTILE TY 2  
255 SY (POND BOTTOM)
- 640-010A RIPRAP/EROSION CONTROL GEOTEXTILE
  - 6.00 SY 16+86.70, 77.69' R
  - 6.00 SY 16+90.50, 98.23' R
  - 6.00 SY 16+57.54, 70.41' R
- S913-05A SP FILTER SAND  
62 CY
- S913-05B SP ROCK MULCH  
150 CY

**NOTE:**

1. Trees must be a small tree selected from Idaho Falls code 8-9-4. All trees selected must be approved by the city engineer. Center all trees between the existing top back of curb and any existing gas lines.

**LEGEND**

- ROCK MULCH AREA
- RIPRAP (D50=6")

POINT	STATION/OFFSET	ELEVATION
1	16+99.33, 99.95' R	4718.50'
2	17+58.51, 72.62' R	4718.50'
3	17+57.63, 67.80' R	4718.50'
4	17+01.27, 67.80' R	4718.50'
5	16+81.60, 83.91' R	4718.50'
6	16+82.05, 90.43' R	4718.50'
7	16+83.16, 93.22' R	4718.50'
8	17+05.05, 113.59' R	4723.50'
9	17+63.70, 86.56' R	4723.50'
10	17+58.18, 52.81' R	4723.50'
11	17+01.07, 52.80' R	4723.50'
12	16+68.03, 80.15' R	4723.50'
13	16+69.32, 96.44' R	4723.50'
14	16+70.46, 99.22' R	4723.50'

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED  
B. SCHELLENBERG

DESIGN CHECKED  
K. KAUER

DETAILED  
B. SCHELLENBERG

DRAWING CHECKED  
K. KAUER

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME  
22008\_POND\_001.DGN

DRAWING DATE:  
January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety → YOUR Mobility → YOUR Economic Opportunity

**Horrocks.**

PROJECT NO.  
**A022(008)**

**DRAINAGE POND PLAN SHEET**

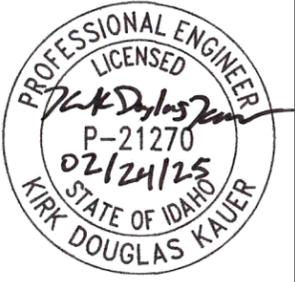
**NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS**

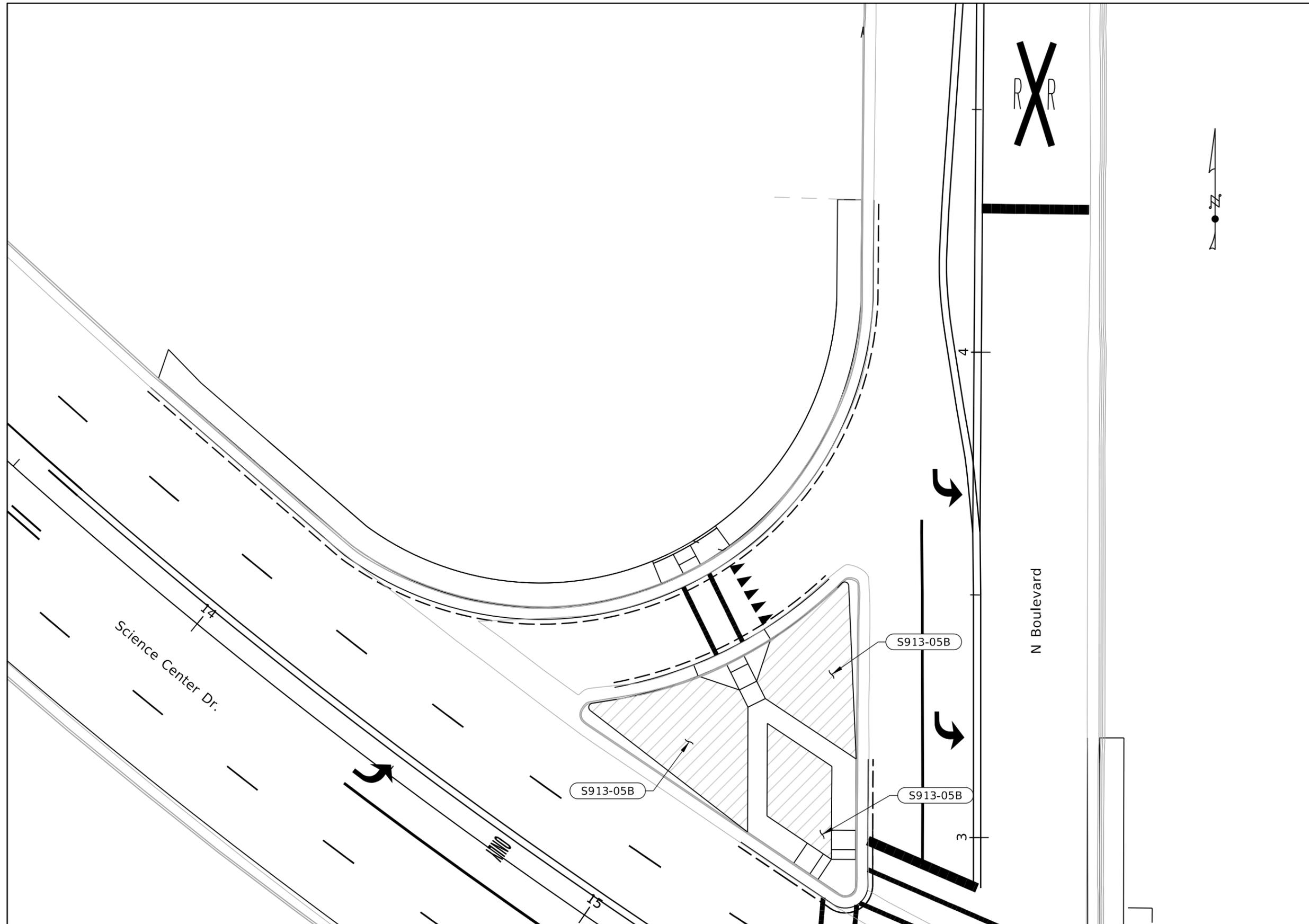
**ENGLISH**

COUNTY  
BONNEVILLE

KEY NUMBER  
22008

SHEET 21 OF 61





S913-05B SP ROCK MULCH  
16 CY

**LEGEND**  
 ROCK MULCH AREA  
 RIPRAP (D50=6")

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED B. SCHELLENBERG	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED K. KAUER	
DETAILED B. SCHELLENBERG	CADD FILE NAME 22008_POND_001.DGN
DRAWING CHECKED K. KAUER	DRAWING DATE: June 30, 2025

**IDAHO TRANSPORTATION DEPARTMENT**  
 YOUR Safety→YOUR Mobility→YOUR Economic Opportunity  

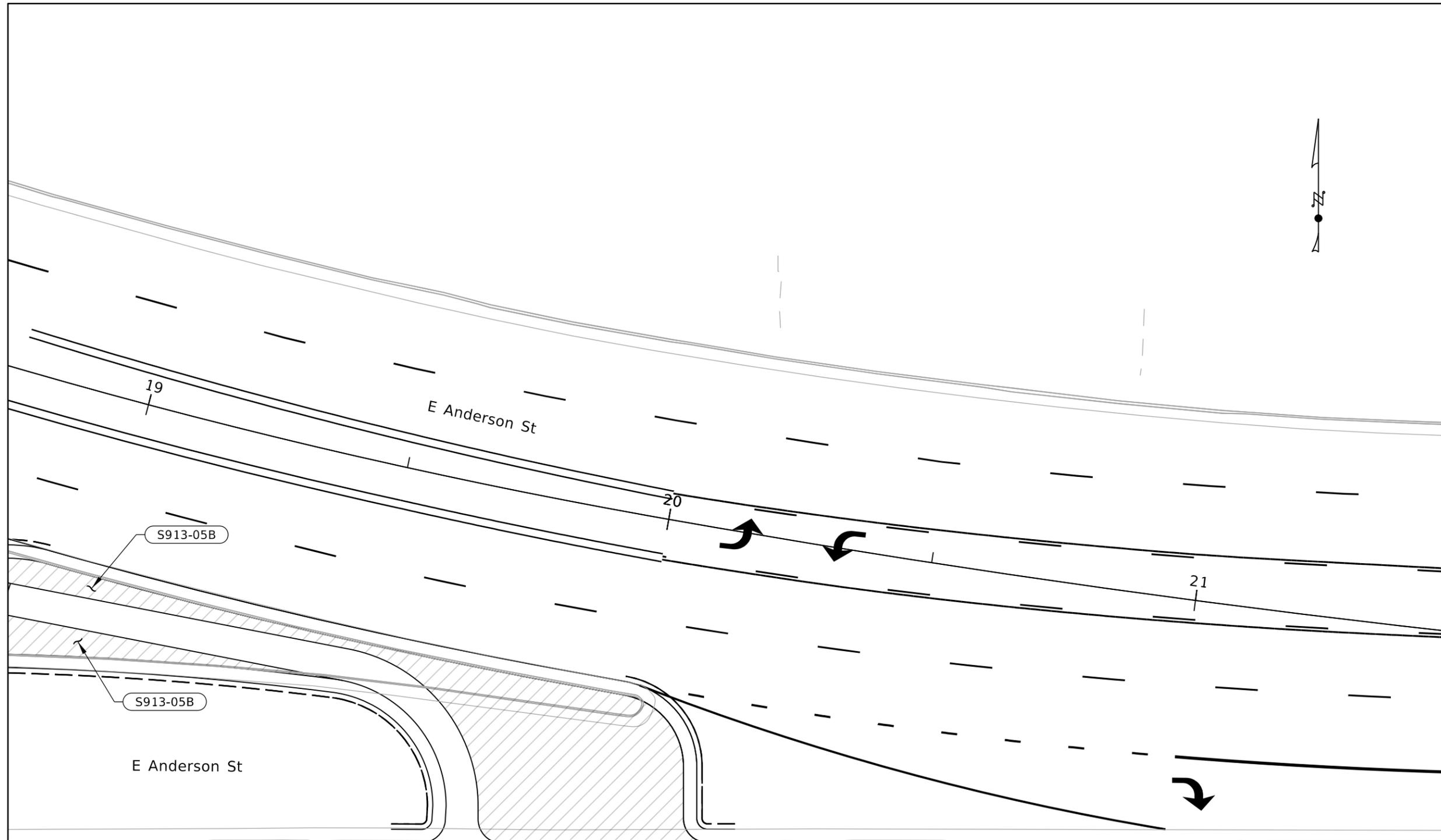

PROJECT NO.  A022(008)
------------------------------

**DRAINAGE POND PLAN SHEET**  
 NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS

<b>ENGLISH</b>
COUNTY BONNEVILLE
KEY NUMBER 22008
SHEET 22 OF 61



S913-05B SP ROCK MULCH  
22 CY



**LEGEND**  
 ROCK MULCH AREA  
 RIPRAP (D50=6")



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED  
B. SCHELLENBERG  
 DESIGN CHECKED  
K. KAUER  
 DETAILED  
B. SCHELLENBERG  
 DRAWING CHECKED  
K. KAUER

SCALES SHOWN  
ARE FOR 11" X 17"  
PRINTS ONLY  
 CADD FILE NAME  
22008 POND 001.DGN  
 DRAWING DATE:  
January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**  
 YOUR Safety→YOUR Mobility→YOUR Economic Opportunity  
  
**Horrocks.**

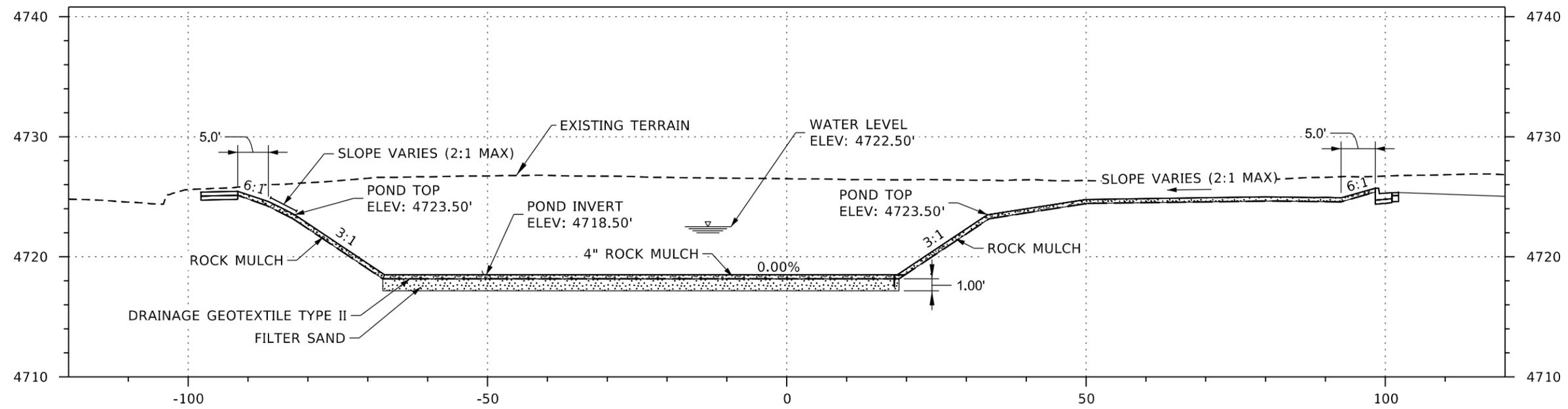
PROJECT NO.  
A022(008)

**DRAINAGE POND PLAN SHEET**  
 NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS

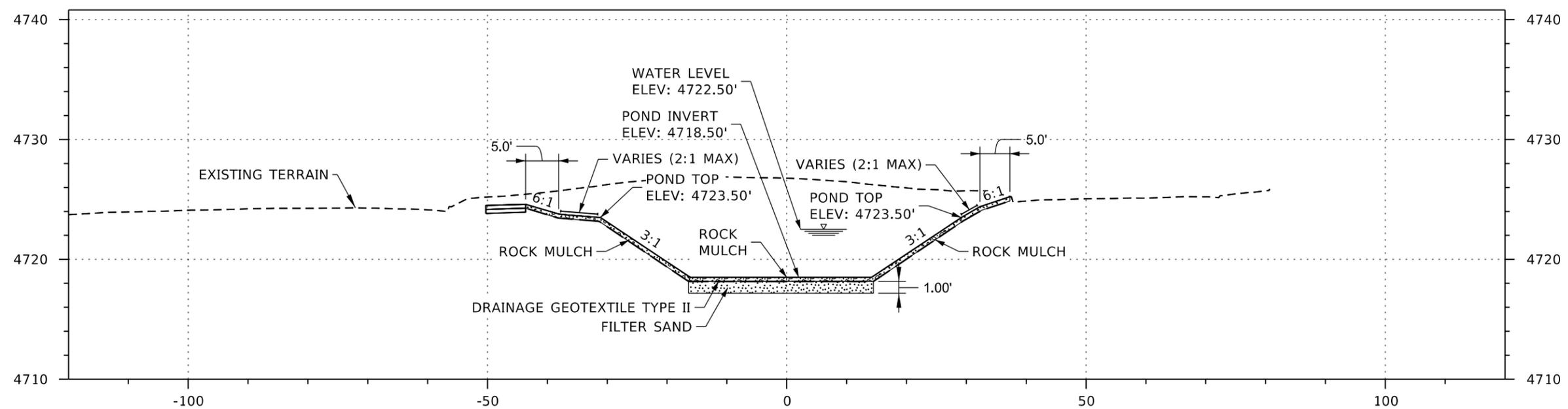
**ENGLISH**  
 COUNTY BONNEVILLE  
 KEY NUMBER 22008  
 SHEET 23 OF 61

**PROFESSIONAL ENGINEER LICENSED**  
  
 P-21270  
 02/24/25  
 KIRK DOUGLAS KAUER  
 STATE OF IDAHO

POND CROSS SECTION A-A



POND CROSS SECTION B-B



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED  
B. SCHELLENBERG  
DESIGN CHECKED  
K. KAUER  
DETAILED  
B. SCHELLENBERG  
DRAWING CHECKED  
K. KAUER

SCALES SHOWN  
ARE FOR 11" X 17"  
PRINTS ONLY  
CADD FILE NAME  
22008 POND 001.DGN  
DRAWING DATE:  
\$PLT\$

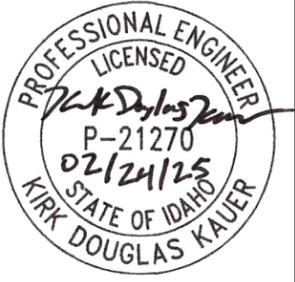
IDAHO  
TRANSPORTATION  
DEPARTMENT  
YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

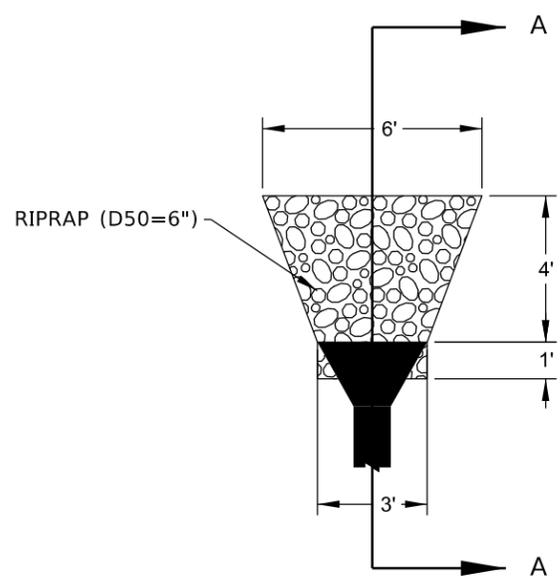
Horrocks.

PROJECT NO.  
A022(008)

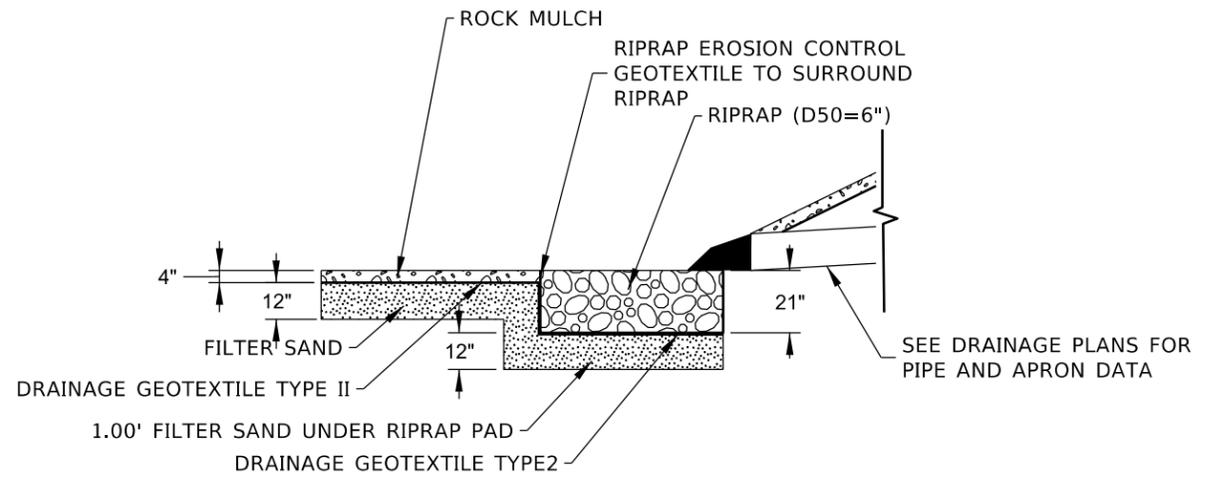
POND CROSS SECTION SHEET  
NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS

ENGLISH  
COUNTY BONNEVILLE  
KEY NUMBER 22008  
SHEET 24 OF 61





PLAN VIEW



SECTION A-A

RIP-RAP PAD DETAIL

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED  
B. SCHELLENBERG  
DESIGN CHECKED  
K. KAUER  
DETAILED  
B. SCHELLENBERG  
DRAWING CHECKED  
K. KAUER

SCALES SHOWN  
ARE FOR 11" X 17"  
PRINTS ONLY  
CADD FILE NAME  
22008 POND 001.DGN  
DRAWING DATE:  
January 22, 2025

**IDAHO  
TRANSPORTATION  
DEPARTMENT**

YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

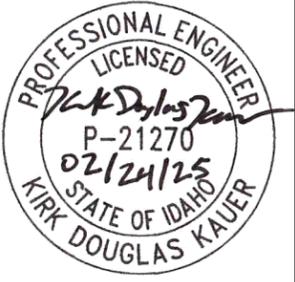


**Horrocks.**

PROJECT NO.  
  
A022(008)

DRAINAGE POND DETAIL SHEET  
  
NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS

ENGLISH  
COUNTY BONNEVILLE  
KEY NUMBER 22008  
SHEET 25 OF 61



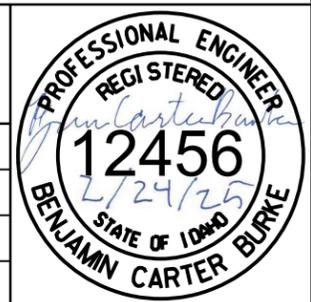
ITEM NO.	QUAN.	SCIENCE CENTER & N BLVD INTERSECTION	ITEM NO.	QUAN.	SCIENCE CENTER & N BLVD INTERSECTION																																		
<u>ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR FOR SPECIAL INSTALL SIGN (BID ITEM 616-090A)</u>			<u>ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR FOR SIGNAL HOUSING (BID ITEM 656-010A)</u>																																				
1.	VARIOUS	<p><u>SIGNS SUPPLIED BY THE CONTRACTOR:</u></p> <table border="1"> <thead> <tr> <th>SIGN</th> <th>SIZE (INCHES)</th> <th>MATERIAL</th> <th>AREA (SF)</th> <th>QTY</th> <th>TOTAL SF</th> </tr> </thead> <tbody> <tr> <td>D3-1</td> <td>18" x 64"</td> <td>B</td> <td>8</td> <td>2</td> <td>16</td> </tr> <tr> <td>D3-1</td> <td>30" x 108"</td> <td>B</td> <td>22.5</td> <td>2</td> <td>45</td> </tr> </tbody> </table>	SIGN	SIZE (INCHES)	MATERIAL	AREA (SF)	QTY	TOTAL SF	D3-1	18" x 64"	B	8	2	16	D3-1	30" x 108"	B	22.5	2	45	1.	10 EACH	<p><u>VEHICLE SIGNAL HEADS</u>, 12", VERTICAL, 3 SECTION, WITH 5" FLAT BLACK POLYCARBONATE BACKPLATE AND WITH FLAT BLACK POLYCARBONATE TUNNEL VISORS, BACKPLATE TO INCLUDE RETROREFLECTIVE BORDER TO BE 3M DIAMOND GRADE CONSPICUITY SHEETING SERIES 983-71 YELLOW TAPE IN 2 INCH WIDTH. RETROREFLECTIVE TAPE TO BE ALIGNED ON THE OUTER EDGE OF THE BACKPLATE. FOR ALL TRAFFIC SIGNAL HEAD NUMBERS 21, 22, 23, 41, 42, 61, 62, 63, 81 AND 82. TO BE ONE OF THE FOLLOWING OR APPROVED EQUAL:</p> <ol style="list-style-type: none"> <li>1. PEEK NO. PSC03C300, 121212PE, 0700493C</li> <li>2. SEIMENS ITS NO. SG103A1C11GGG30, BPB503ANF, A70012005</li> <li>3. MCCANI NO. M31515, M18216, M19273</li> </ol>																
SIGN	SIZE (INCHES)	MATERIAL	AREA (SF)	QTY	TOTAL SF																																		
D3-1	18" x 64"	B	8	2	16																																		
D3-1	30" x 108"	B	22.5	2	45																																		
2.	2 EACH	<p><u>SIGN MOUNTING BRACKETS</u>, FOR 18" X 64" STREET NAME SIGNS, TO BE ONE OF THE FOLLOWING OR APPROVED EQUAL:</p> <ol style="list-style-type: none"> <li>1. ASTRO BRAC PELCO MODEL NO. AS-0144-60-120-SS</li> <li>2. OLSON SKYBRAC MODEL NO. SS-SBC120-SBK-60TK-12</li> </ol>	2.	4 EACH	<p><u>VEHICLE SIGNAL HEADS</u>, 12", VERTICAL, 4 SECTION, WITH 5" FLAT BLACK POLYCARBONATE BACKPLATE AND WITH FLAT BLACK POLYCARBONATE TUNNEL VISORS, BACKPLATE TO INCLUDE RETROREFLECTIVE BORDER TO BE 3M DIAMOND GRADE CONSPICUITY SHEETING SERIES 983-71 YELLOW TAPE IN 2 INCH WIDTH. RETROREFLECTIVE TAPE TO BE ALIGNED ON THE OUTER EDGE OF THE BACKPLATE. FOR ALL TRAFFIC SIGNAL HEAD NUMBERS 11, 31, 51 AND 71. TO BE ONE OF THE FOLLOWING OR APPROVED EQUAL:</p> <ol style="list-style-type: none"> <li>1. PEEK NO. PSC04C4000, 12121212PE, 0700493C</li> <li>2. SIEMENS ITS NO. SG104A1C11GGG40, BPB504ANF, A7001205</li> <li>3. MCCAIN NO. M32700, M18219, M19273</li> </ol>																																		
3.	2 EACH	<p><u>SIGN MOUNTING BRACKETS</u>, FOR 30" X 108" STREET NAME SIGNS, TO BE ONE OF THE FOLLOWING OR APPROVED EQUAL:</p> <ol style="list-style-type: none"> <li>1. ASTRO BRAC PELCO MODEL NO. AS-0144-102-120-SS</li> <li>2. OLSON SKYBRAC MODEL NO. SS-SBC120-SBK-102TK-23.5</li> </ol>	3.	6 EACH	<p><u>TRAFFIC SIGNAL BRACKET</u>, FOR MAST ARM MOUNTING OF THREE-SECTION HEAD TO BE ONE OF THE FOLLOWING OR APPROVED EQUAL:</p> <ol style="list-style-type: none"> <li>1. ASTRO BRAC PELCO MODEL NO. AS-0125-3-96</li> <li>2. OLSON SS-SBC(90)-46 OR CORAL SS-SBC(90)-46</li> </ol>																																		
<u>ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR FOR ILLUMINATION TYPE 2 (BID ITEM 619-010A)</u>																																							
1.	4 EACH	<p><u>LED LUMINAIRE</u>, 120-227V, 17,000 TO 19,000 LUMENS, 4000K, TYPE II, FULL CUT-OFF, TO BE ONE OF THE FOLLOWING OR APPROVED EQUAL:</p> <ol style="list-style-type: none"> <li>1. AMERICAN ELECTRIC LIGHTING NO. ATBO-P304-MVOLT-R2-A0-P7-SH-10X</li> <li>2. EATON STREETWORKS NAVION NO. NVN-SA3B-740-U-T2R-10K-AP-PR7-OA/RA1013 WITH RFWD-10 YEARS</li> <li>3. LEOTEK EC7-18M-MV-NW-3-GY-700</li> </ol>	4.	4 EACH	<p><u>TRAFFIC SIGNAL BRACKET</u>, FOR SIDE OF POLE MOUNTING OF ONE THREE-SECTION HEAD TO BE ONE OF THE FOLLOWING OR APPROVED EQUAL:</p> <ol style="list-style-type: none"> <li>1. MCCAIN TRAFFIC SUPPLY CATALOG NO. SV-1-T</li> <li>2. PELCO CONTROL PRODUCTS SP-8357-3-LH-WH-AD-P34</li> </ol>																																		
2.	8 EACH	<p><u>FUSE</u>, 8 AMP CARTRIDGE TYPE TO BE BUSSMAN MFG CATALOG NO. FNM-8, LITTELFUSE FLM-8M, FERRAZ SHAWMUT CAT NO. TRM-8 OR APPROVED EQUAL</p>	5.	4 EACH	<p><u>TRAFFIC SIGNAL BRACKET</u>, FOR MAST ARM MOUNTING OF FOUR-SECTION HEAD TO BE ONE OF THE FOLLOWING OR APPROVED EQUAL:</p> <ol style="list-style-type: none"> <li>1. ASTRO BRAC PELCO MODEL NO. AS-0125-4-96</li> <li>2. OLSON SS-SBC(90)-46 OR CORAL SS-SBC(90)-60</li> </ol>																																		
3.	8 EACH	<p><u>SINGLE POLE CONNECTOR KITS</u>, (2 KITS PER LUMINAIRE), IN LINE FUSED TYPE TO BE BUSSMAN MODEL NO. HEB-JW-RLC-A; LITTELFUSE LED-AA-S; BUCHANAN 65-U-U, OR APPROVED EQUAL</p>	6.		<p><u>12" LED TRAFFIC SIGNAL MODULES</u>, WITH QUICK DISCONNECT LEADS, SMOOTH LENS SURFACE, 120 VAC. TO BE ONE OF THE FOLLOWING OR APPROVED EQUAL:</p> <table border="1"> <thead> <tr> <th></th> <th>GE LIGHTING</th> <th>DIALIGHT</th> <th>LEOTEK</th> </tr> </thead> <tbody> <tr> <td>10 EACH</td> <td>LED RED BALL</td> <td>DR6-RTFB-VLA</td> <td>433-1210-003</td> <td>TSL-12R-LX-IL6-A1-P3</td> </tr> <tr> <td>10 EACH</td> <td>LED YELLOW BALL</td> <td>DR6-YTFB-VLA</td> <td>433-3230-901</td> <td>TSL-12Y-LX-IL6-A1-P3</td> </tr> <tr> <td>10 EACH</td> <td>LED GREEN BALL</td> <td>DR6-GCFB-VLA</td> <td>433-2270-001</td> <td>TSL-12G-LX-IL6-A1-P3-CLR</td> </tr> <tr> <td>4 EACH</td> <td>LED RED ARROW</td> <td>DR6-RTAAN-VLA</td> <td>432-1314-001</td> <td>TSL-12RA-LX-IL6-A1-P3</td> </tr> <tr> <td>8 EACH</td> <td>LED YELLOW ARROW</td> <td>DR6-YTAAAN-VLA</td> <td>431-3334-901</td> <td>TSL-12YA-LX-IL6-A1-P3</td> </tr> <tr> <td>4 EACH</td> <td>LED GREEN ARROW</td> <td>DR6-GCAAN-VLA</td> <td>432-2374-001</td> <td>TSL-12GA-LX-IL6-A1-P3-CLR</td> </tr> </tbody> </table>		GE LIGHTING	DIALIGHT	LEOTEK	10 EACH	LED RED BALL	DR6-RTFB-VLA	433-1210-003	TSL-12R-LX-IL6-A1-P3	10 EACH	LED YELLOW BALL	DR6-YTFB-VLA	433-3230-901	TSL-12Y-LX-IL6-A1-P3	10 EACH	LED GREEN BALL	DR6-GCFB-VLA	433-2270-001	TSL-12G-LX-IL6-A1-P3-CLR	4 EACH	LED RED ARROW	DR6-RTAAN-VLA	432-1314-001	TSL-12RA-LX-IL6-A1-P3	8 EACH	LED YELLOW ARROW	DR6-YTAAAN-VLA	431-3334-901	TSL-12YA-LX-IL6-A1-P3	4 EACH	LED GREEN ARROW	DR6-GCAAN-VLA	432-2374-001	TSL-12GA-LX-IL6-A1-P3-CLR
	GE LIGHTING	DIALIGHT	LEOTEK																																				
10 EACH	LED RED BALL	DR6-RTFB-VLA	433-1210-003	TSL-12R-LX-IL6-A1-P3																																			
10 EACH	LED YELLOW BALL	DR6-YTFB-VLA	433-3230-901	TSL-12Y-LX-IL6-A1-P3																																			
10 EACH	LED GREEN BALL	DR6-GCFB-VLA	433-2270-001	TSL-12G-LX-IL6-A1-P3-CLR																																			
4 EACH	LED RED ARROW	DR6-RTAAN-VLA	432-1314-001	TSL-12RA-LX-IL6-A1-P3																																			
8 EACH	LED YELLOW ARROW	DR6-YTAAAN-VLA	431-3334-901	TSL-12YA-LX-IL6-A1-P3																																			
4 EACH	LED GREEN ARROW	DR6-GCAAN-VLA	432-2374-001	TSL-12GA-LX-IL6-A1-P3-CLR																																			
4.	60 EACH	<p><u>SINGLE POLE BREAKAWAY CONNECTOR KITS</u>, NON FUSED IN LINE TO BE ONE OF THE FOLLOWING: BUSSMAN MFG NO. HET-AW-RLC-A OR LITTELFUSE NO. LET-AA-S</p>																																					
5.	12 EACH	<p><u>SPLICE KITS</u>, 3 KITS PER LUMINAIRE, TO BE MECHANICAL WATERPROOF</p>																																					
6.	2 EACH	<p><u>POLE, STEEL</u>, LUMINAIRE, GALVANIZED ANCHOR BASE WITH BREAKAWAY TYPE STEEL NECKED COUPLERS, NOMINAL MOUNTING HEIGHT 40 FT. WITH 15 FT. MAST ARMS. TO BE AMERON POLE PRODUCT NO. N5015 OR VALMOT INDUSTRIES DS32 SERIES OR APPROVED EQUAL.</p>																																					
7.	2 EACH	<p><u>POLE FOUNDATION</u>, REINFORCED CONCRETE, TYPE C (3ft x 8ft) FOR LUMINAIRE POLE. FOR CONCRETE REINFORCING STEEL QUANTITIES AND DETAIL CONFIGURATIONS, REFER TO STANDARD DRAWING 619-1.</p>																																					

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED R. TELFORD	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	
DESIGN CHECKED B. BURKE		
DETAILED R. TELFORD	CADD FILE NAME 22008_mq_001.DGN	
DRAWING CHECKED B. BURKE	DRAWING DATE: January 22, 2025	

PROJECT NO.	MATERIALS QUANTITY SHEET
A022(008)	NHS-7046, SCIENCE CENTER; N BLVD TO HOLMES, IDAHO FALLS

ENGLISH
COUNTY BONNEVILLE
KEY NUMBER 22008
SHEET 26 OF 61



ITEM NO.	QUAN.	SCIENCE CENTER & N BLVD INTERSECTION
<b>ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR FOR INTERSECTION PREEMPTION DETECTION SYSTEM (BID ITEM 656-015A)</b>		
1.	1 EACH	GCT OPTICOM PREEMPTION GPS AND INFARED DETECTION SYSTEM, TO INCLUDE 3100 GPS RADIO SYSTEM, 764 FOUR CHANNEL ULTI MOSE PHASE SELECTOR, GPS CARD RACK, INFARED CARD RACK, 786 AUXILIARY INTERFACED PANELS, AND CONFIMATION LIGHTS.
2.	VARIOUS	MISCELLANEOUS ITEMS, TO INCLUDE WIRE OF VARIOUS TYPES AND VOLTAGE REQUIRMENTS WITH IDENTIFICATION MARKERS, DETECGOR MAST-ARM MOUNTING BRACKETS TO BE PELCO MODEL NO. AS-3009 WITH GUSSETED TUBE AB-2003-3 OR APPROVED EQUAL.
<b>ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR FOR INTERSECTION DETECTION SYSTEM-VIDEO (BID ITEM 656-020C)</b>		
1.	1 EACH	CURREX VIDEO DETECTION SYSTEM, PROVIDED WITH 1 BELL CAMERA FOR STOP BAR DETECTION WITH CABLE MOUNTING BRACKETS, 1 MOUNTING POLE, 1 CURREX PROCESSOR WITH THE FOLLOWNIG MODULES: SMART ITS STANDARD, ALAOGUE CAMERA ADAPTER, SDLC MODULE, AND NTCIP MODULE. PROVIDE ALL THE OTHER HARDWARE AND SOFTWARE AS NEEDED FOR A COMPLETE SYSTEM.
2.	VARIOUS	MISCELLANEOUS ITEMS, TO INCLUDE WIRING, CONNECTORS, HARDWARE, FITTINGS, AND VARIOUS OTHER ITEMS NECESSARY FOR A COMPLETE INSTALLATION. PLACE A #12 LOCATE WIRE WITH VIDEO DETECTION CONDUIT.
<b>ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR FOR ELECTRICAL SERVICE PEDESTAL TYPE 1 (BID ITEM 656-025A)</b>		
1.	1 EACH	ELECTRICAL SERVICE PEDESTAL, TYPE 1, WITH PHOTO CELL CONTROL TO BE ONE OF THE FOLLOWING OR APPROVED EQUAL:  1. MYERS ELECTRICAL PRODUCTS. CATALOG NO. MEUG20-M100w/TB-ITD (MOD) 2. MILBANK NO. CP3B11113BWD01
2.	1 EACH	PHOTOELECTRIC CONTROL, 240 VOLT TO BE MOUNTED ON RECEPTACLE PROVIDED IN ELECTRICAL SERVICE PEDESTAL. TO BE INTERMATIC MODEL NO. LED4536SC, FP OUTDOOR LIGHTING CONTROL MODEL NO. ELL-124, TORK-NSI MODEL NO ZTL124 OR APPROVED EQUAL
<b>ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR FOR INTERSECTION SIGNAL STRUCTURE (BID ITEM 656-030A)</b>		
1.	1 EACH	POLE, STEEL, COMBINATION TRAFFIC SIGNAL AND LUMINAIRE, WITH 45' SIGNAL MASTARM AND A 15' LUMINAIRE MASTARM WITH 2" SLIP FITTER (LUMINAIRE MOUNTING HEIGHT TO BE 40'). TO BE CLASS 2 STANDARD MAST ARM TRAFFIC SIGNAL POLE (IDENTIFICATION NO. ID-2-45-L-4015) SUPPLIED BY VALMONT, AMERON OR APPROVED EQUAL. FOR POLE A AS INDICATED ON PLANS. REQUIRES TYPE "D" FOUNDATION.
2.	1 EACH	POLE, STEEL, TRAFFIC SIGNAL POLE, WITH 30' SIGNAL MASTARM. TO BE CLASS 1 STANDARD MAST ARM TRAFFIC SIGNAL POLE (IDENTIFICATION NO. ID-1-30-L-4015) SUPPLIED BY VALMONT, AMERON OR APPROVED EQUAL. FOR POLE B AS INDICATED ON PLANS. REQUIRES TYPE "D" FOUNDATION.
3.	1 EACH	POLE, STEEL, TRAFFIC SIGNAL POLE, WITH 40' SIGNAL MASTARM. TO BE CLASS 2 STANDARD MAST ARM TRAFFIC SIGNAL POLE (IDENTIFICATION NO. ID-2-40-L-4015) SUPPLIED BY VALMONT, AMERON OR APPROVED EQUAL. FOR POLE C AS INDICATED ON PLANS. REQUIRES TYPE "D" FOUNDATION.
4.	1 EACH	POLE, STEEL, COMBINATION TRAFFIC SIGNAL AND LUMINAIRE, WITH 30' SIGNAL MASTARM AND A 15' LUMINAIRE MASTARM WITH 2" SLIP FITTER (LUMINAIRE MOUNTING HEIGHT TO BE 40'). TO BE CLASS 1 STANDARD MAST ARM TRAFFIC SIGNAL POLE (IDENTIFICATION NO. ID-1-30-L-4015) SUPPLIED BY VALMONT, AMERON OR APPROVED EQUAL. FOR POLE D AS INDICATED ON PLANS. REQUIRES TYPE "D" FOUNDATION.
5.	4 EACH	FOUNDATION, REINFORCED CONCRETE, TYPE F FOR SIGNAL POLE. SEE ITD STANDARD DRAWING 656-3 FOR BOLT PATTERN, REBAR QUANTITY, AND CONCRETE QUANTITY.

ITEM NO.	QUAN.	SCIENCE CENTER & N BLVD INTERSECTION
<b>ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR FOR INTERSECTION PEDESTRIAN SYSTEM (BID ITEM 656-035A)</b>		
1.	3 EACH	PEDESTRIAN SIGNAL BRACKET, FOR SIDE OF POLE TERMINAL COMPARTMENT MOUNTING OF ONE WAY 16" PEDESTRIAN SIGNAL HEADS. TO BE ONE OF THE FOLLOWING OR APPROVED EQUAL:  1. MCCAIN TRAFFIC SUPPLY CATALOG NO. SP-1-T 2. PELCO CONTROL PRODUCTS SP-8317-LH-WH-AD-P34
2.	1 EACH	PEDESTRIAN SIGNAL BRACKET, FOR SIDE OF POLE TERMINAL COMPARTMENT MOUNTING OF TWO WAY 16" PEDESTRIAN SIGNAL HEADS. TO BE ONE OF THE FOLLOWING OR APPROVED EQUAL:  1. MCCAIN TRAFFIC SUPPLY CATALOG NO. SP-2-T 2. PELCO CONTROL PRODUCTS SP-8329-LH-WH-AD-P34
3.	3 EACH	PEDESTRIAN SIGNAL BRACKET, FOR TOP OF POLE TERMINAL COMPARTMENT MOUNTING OF ONE WAY 16" PEDESTRIAN SIGNAL HEADS. TO BE ONE OF THE FOLLOWING OR APPROVED EQUAL:  1. MCCAIN TRAFFIC SUPPLY CATALOG NO. TP-1-T 2. PELCO CONTROL PRODUCTS SP-8316-LH-WH-AD-P34
4.	8 EACH	PEDESTRIAN SIGNAL HOUSING, 18" X 18", TRAFFIC OLIVE GREEN, WITH POWDER-COATED ALUMINUM EXTERIOR UV RESISTANT POLYCARBONATE FOR ALL PEDESTRIAN SIGNAL HEADS. TO BE ONE OF THE FOLLOWING OR APPROVED EQUAL:  1. ECONOLITE 2. MOBOTREX 3. MCCAIN
5.	8 EACH	PEDESTRIAN SIGNAL HEAD, 16", LED COUNTDOWN HAND/MAN, TO BE ONE OF THE FOLLOWING OR APPROVED EQUAL:  1. DIALIGHT 430-6479-001X 2. LEOTEK TSL-PED-16-CIL-P1
6.	8 EACH	PEDESTRIAN PUSH BUTTON AND SIGN ASSEMBLY, TO INCLUDE 9" X 15" MOUNTING ASSEMBLIES, PUSH BUTTON AND 9" X 15" SIGN DECALS (MUTCD R10-3E) TO BE:  1. CAMPBELL COMPANY GUARDIAN APS WITH SPI
7.	8 EACH	PEDESTRIAN PUSH BUTTON MOUNTING EXTENDER, WELDED STEEL WITH A HOT DIPPED GALVANIZED COATING. TO INCLUDE 6" EXTENSION AND ALL HARDWARE NECESSARY FOR INSTALLATION. TO BE:  1. CAMPBELL COMPANY
<b>ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR FOR SIGNAL CABINET (BID ITEM 656-040A)</b>		
1.	1 EACH	SIGNAL CABINET, TS-2 TYPE 1, NEMA "P" STRETCH, ALUMINUM TRAFFIC CONTROL CABINET, WITH ALL RELATED EQUIPMENT, RELAYS, 722 TWO DIRECTIONAL-TWO OUTPUT INFARED PREEMPT DETECTOR, MALFUNCTION MANAGEMENT UNIT, 16 LOAD SWITCHES, DETECTOR RACK FULLY CONFIGURED FOR CONFIGURE THE CABINET WITH POWER DISTRIBUTION, POLICE PANEL, TECH PANEL AND TEST SWITCHES PER IDAHO STANDARDS AND SPECIFICATIONS FOR A TS-2 TYPE 1 P-A-16 CABINET AVAILABLE ON ITD'S WEBSITE IN REFERENCE AND STANDARDS.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED R. TELFORD	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED B. BURKE	CADD FILE NAME 22008_mq_002.DGN
DETAILED R. TELFORD	DRAWING DATE: January 22, 2025
DRAWING CHECKED B. BURKE	

**IDAHO TRANSPORTATION DEPARTMENT**  
YOUR Safety-YOUR Mobility-YOUR Economic Opportunity

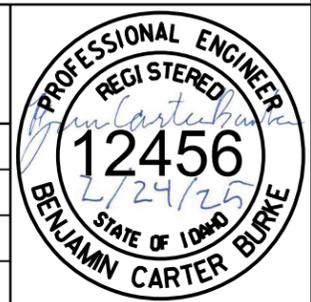


**Horrocks.**

PROJECT NO.	A022(008)
-------------	-----------

MATERIALS QUANTITY SHEET	NHS-7046, SCIENCE CENTER; N BLVD TO HOLMES, IDAHO FALLS
--------------------------	---

ENGLISH	COUNTY BONNEVILLE
KEY NUMBER	22008
SHEET	27 OF 61



ITEM NO.	QUAN.	SCIENCE CENTER & N BLVD INTERSECTION	ITEM NO.	QUAN.	SCIENCE CENTER & N BLVD INTERSECTION
		<u>ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR FOR SIGNAL CONTROLLER (BID ITEM 656-045A)</u>			
1.	1 EACH	<u>CONTROLLER</u> , TO BE ECONOLITE COBALT ATC CONTROLLER, TO BE COMPATIBLE WITH ECONOLITE'S CENTRACS ATMS SOFTWARE AND HAVE A LCD TOUCH SCREEN WITH WI-FI DONGLE TO ALLOW REMOTE TABLET CONNECTION.			
		<u>ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR FOR PEDESTRIAN &amp; TRAFFIC CONTROL SIGNAL HEAD FRANGIBLE POLES (BID ITEM 656-050A)</u>			
1.	3 EACH	<u>POLE</u> , STEEL, VEH. AND PEDESTRIAN SIGNAL 4-INCH, GALVANIZED RIGID STEEL CONDUIT AT A 8' HEIGHT, THREADED TO MATCH PELCO FRANGIBLE CAST BASE FOR POLES "E", "F" AND "G". REQUIRES TYPE "A" FOUNDATION.			
2.	3 EACH	<u>FOUNDATION</u> , REINFORCED CONCRETE, TYPE A FOR PED. SIGNAL/PUSH BUTTON POLE.			
3.	3 EACH	<u>FRANGIBLE POLE BASE</u> , SQUARE CAST ALUMINUM FOR PEDESTRIAN AND VEHICLE SIGNAL POLE. TO BE THE FOLLOWING OR APPROVED EQUAL:  1. PELCO PB-5336-NL-1A-GL-PNC			
		<u>ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR FOR COMBINED CABINET &amp; SERVICE PEDESTAL FOUNDATION (BID ITEM 656-065A)</u>			
1.	1 EACH	<u>FOUNDATION</u> , REINFORCED CONCRETE, FOR COMBINATION SIGNAL CABINET, SERVICE PEDESTAL, ITS CABINET AND UPS CABINET WITH CONCRETE PAD.			
		<u>ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR FOR ADDITIONAL ELECTRICAL ITEMS (BID ITEM 656-070A)</u>			
1.	13 EACH	<u>JUNCTION BOXES</u> , POLYMER CONCRETE SIZE 17" X 30" X 18" WITH TRAFFIC RATED LOCKING COVER WITH "TRAFFIC" LOGO TO BE ONE OF THE FOLLOWING OR APPROVED EQUAL  1. HUBBELL NO. PG1730Z854 2. OLD CASTLE NO. PC17x30x18-T22 3. ARMORCAST NO. A6001640HAPCX18			
2.	1 EACH	<u>BATTERY BACKUP SYSTEM</u> , TO BE UPS WITH AMBIENT TEMPERATURE AA ENCLOSURE COMPLETE WITH FOUR 12-VOLT BATTERIES AND FULL LED 3-HOUR RUN TIME.			
3.	VARIOUS	<u>MISCELLANEOUS ITEMS</u> TO INCLUDE: RIGID STEEL AND RIGID PLASTIC CONDUIT; CONDUIT TO BE SCH 40 SMOOTH WALL DUCT, #2/0 AWG THWN STRANDED COPPER WIRE (600V); #4 AWG THWN STRANDED COPPER WIRE (600V); #8 AWG THWN STRANDED WIRE (600V); #12 AWG THWN STRANDED WIRE (600V); #14 AWG 7C SIGNAL CABLE (IMSA 19-1-1984); #14 5C SIGNAL CABLE (IMSA 19-1-1984)			

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED R. TELFORD	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED B. BURKE	
DETAILED R. TELFORD	CADD FILE NAME 22008_mq_003.DGN
DRAWING CHECKED B. BURKE	DRAWING DATE: January 22, 2025



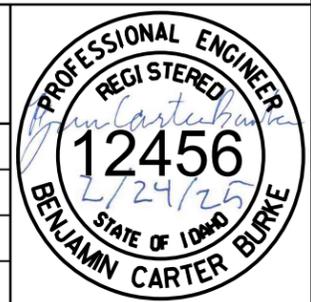
**IDAHO TRANSPORTATION DEPARTMENT**  
YOUR Safety→YOUR Mobility→YOUR Economic Opportunity



PROJECT NO.	A022(008)
-------------	-----------

MATERIALS QUANTITY SHEET	NHS-7046, SCIENCE CENTER; N BLVD TO HOLMES, IDAHO FALLS
--------------------------	---

ENGLISH
COUNTY BONNEVILLE
KEY NUMBER 22008
SHEET 28 OF 61



Pole "C" ELEV. 4723.21  
Signal Mast Arm 40'  
Sta. 15+32.73, 41.00' L  
Pole Hgt. 20'

Pole "I" ELEV. 4723.36  
Illumination Pole  
Lum. Mast Arm 15'  
Sta. 15+01.05, 35.63' L  
Pole Hgt. 40'

Pole "D" ELEV. 4723.58  
Signal Mast Arm 30'  
Lum. Mast Arm 15'  
Sta. 16+03.33, 50.22' L  
Pole Hgt. 40'

Pole "H" ELEV. 4723.60  
Ped Pole  
Sta. 16+21.90, 39.84' L  
Pole Hgt. 8'

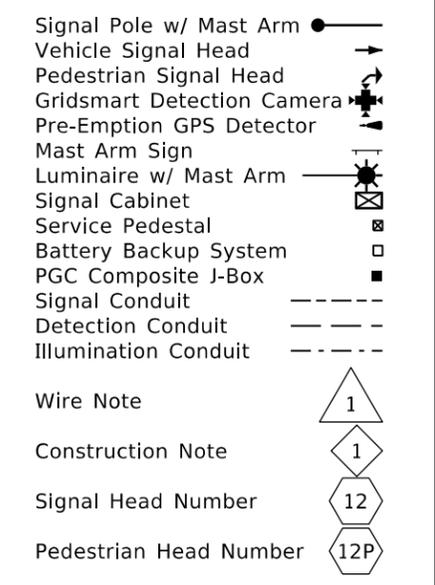
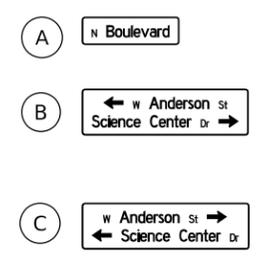
Pole "G" ELEV. 4723.55  
Ped Pole  
Sta. 15+72.71, 40.29' R  
Pole Hgt. 8'

Pole "B" ELEV. 4723.60  
Signal Mast Arm 30'  
Sta. 15+82.23, 45.2' R  
Pole Hgt. 20'

Pole "F" ELEV. 4723.68  
Push Button Pole  
Sta. 15+86.51, 48.5' R  
Pole Hgt. 5'

Pole "A" ELEV. 4724.35  
Signal Mast Arm 45'  
Lum. Mast Arm 15'  
Sta. 16+63.20, 40.73' R  
Pole Hgt. 40'

Pole "E" ELEV. 4724.66  
Ped Pole  
Sta. 16+51.02, 56.11' R  
Pole Hgt. 8'



Construction notes:

- Relocate illumination conduit from the existing illumination facilities to the proposed service pedestal by intercepting existing conduit and conductors where there are conflicts with proposed signal pole locations. Reinstall the same size and material of the existing conduit and conductors. Install conduit under the roadway using directional drilling methods. This work shall be incidental to 656-070A.
- Relocate the overhead power and fiber optic lines to underground, from the pole located on the South West corner to the South East corner. Reroute lines to the proposed service pedestal location. The existing signal shall maintain its power source. This work shall be incidental to 656-070A.



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED R. TELFORD	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  CADD FILE NAME 22008_int_001.DGN  DRAWING DATE: June 30, 2025
DESIGN CHECKED B. BURKE	
DETAILED R. TELFORD	
DRAWING CHECKED B. BURKE	

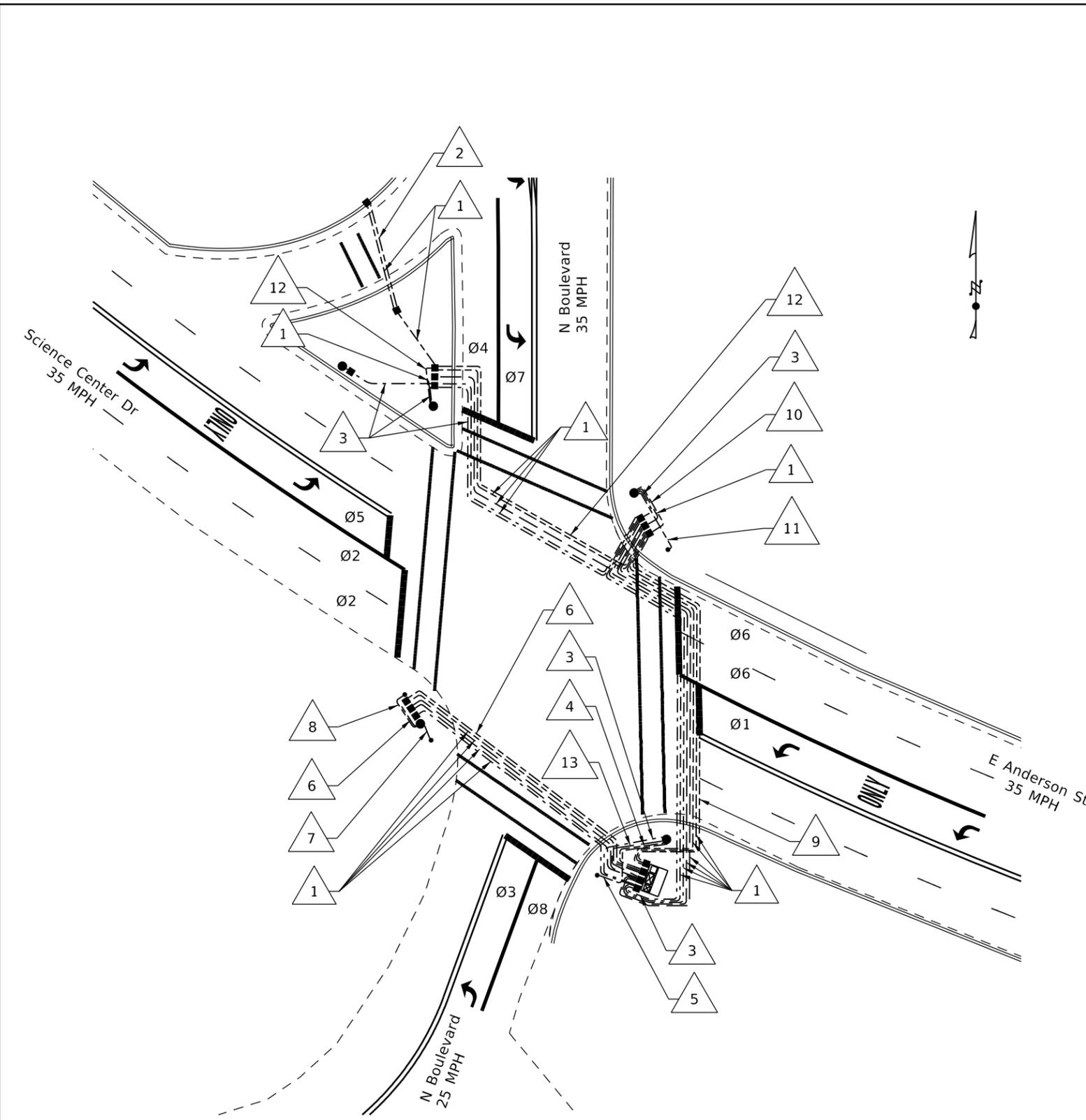
**IDAHO TRANSPORTATION DEPARTMENT**  
 YOUR Safety → YOUR Mobility → YOUR Economic Opportunity

PROJECT NO.  A022(008)
------------------------------

SIGNAL INTERSECTION PLAN  
**NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS**

ENGLISH
COUNTY BONNEVILLE
KEY NUMBER 22008
SHEET 29 OF 61





Note	Conduit	Conductor	Comments
1	2" PC	Empty	Spare
2	3" PC	Empty	Power Conduit
3	2" PC	2-#8 THWN	Illumination Circuit #1
		1-#6 Bare	Ground
4	2" PC	3-5C	Phase Ø2, ØP8 and ØP2
		1-7C	Phase Ø5
5	2" PC	1-5C	Phase ØP8
		1-#6 Bare	Ground
6	2" PC	3-5C	Phase Ø4, ØP4 and ØP2
		1-7C	Phase Ø7
7	2" PC	1-5C	Phase ØP2
		1-#6 Bare	Ground
8	2" PC	1-5C	Phase ØP4
		1-#6 Bare	Ground
9	2" PC	5-5C	Phase Ø6, Ø8, ØP4, ØP6 and ØP8
		2-7C	Phase Ø1 and Ø3
10	2" PC	3-5C	Phase Ø8, ØP6 and ØP8
		1-7C	Phase Ø3
11	2" PC	1-5C	Phase ØP8
		1-#6 Bare	Ground
12	2" PC	3-5C	Phase Ø6, ØP4 and ØP6
		1-7C	Phase Ø1
13	2" PC	1-Cat5e	Camera #1
		1-3C	Pre-emption call back lights
		1-1070 GPS Det Cable	Pre-emption GPS detector
		1-#6 Bare	Ground

- Signal Pole w/ Mast Arm
  - Vehicle Signal Head
  - Pedestrian Signal Head
  - Gridsmart Detection Camera
  - Pre-emption GPS Detector
  - Mast Arm Sign
  - Luminaire w/ Mast Arm
  - Signal Cabinet
  - Service Pedestal
  - Battery Backup System
  - PGC Composite J-Box
  - Signal Conduit
  - Detection Conduit
  - Illumination Conduit
- Wire Note 1
- Construction Note 1
- Signal Head Number 12
- Pedestrian Head Number 12P

Construction Note:

1. Install new conduit under existing pavement using directional drilling methods. This work shall be incidental to 656-070A.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	R. TELFORD	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED	B. BURKE	
DETAILED	R. TELFORD	CADD FILE NAME 22008_cond_001.DGN
DRAWING CHECKED	B. BURKE	DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

**Horrocks.**

PROJECT NO. A022(008)

CONDUIT DAGRAM

NHS-7046, SCIENCE CENTER; N BLVD TO HOLMES, IDAHO FALLS

ENGLISH

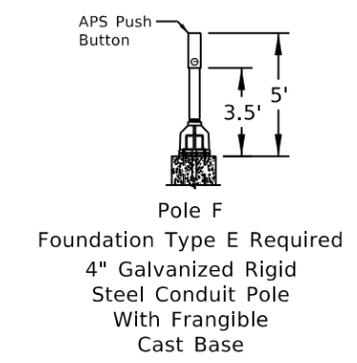
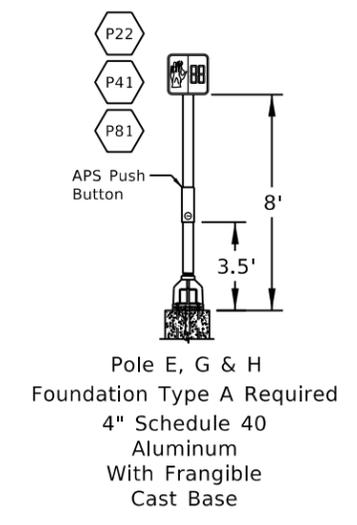
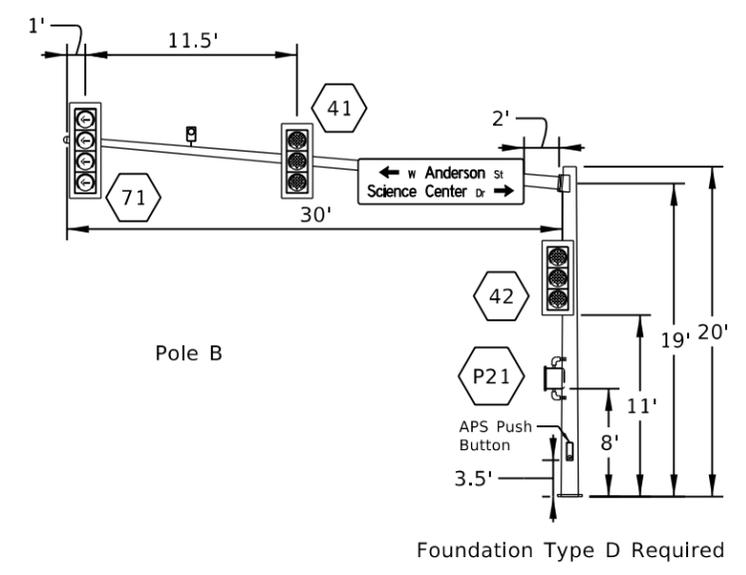
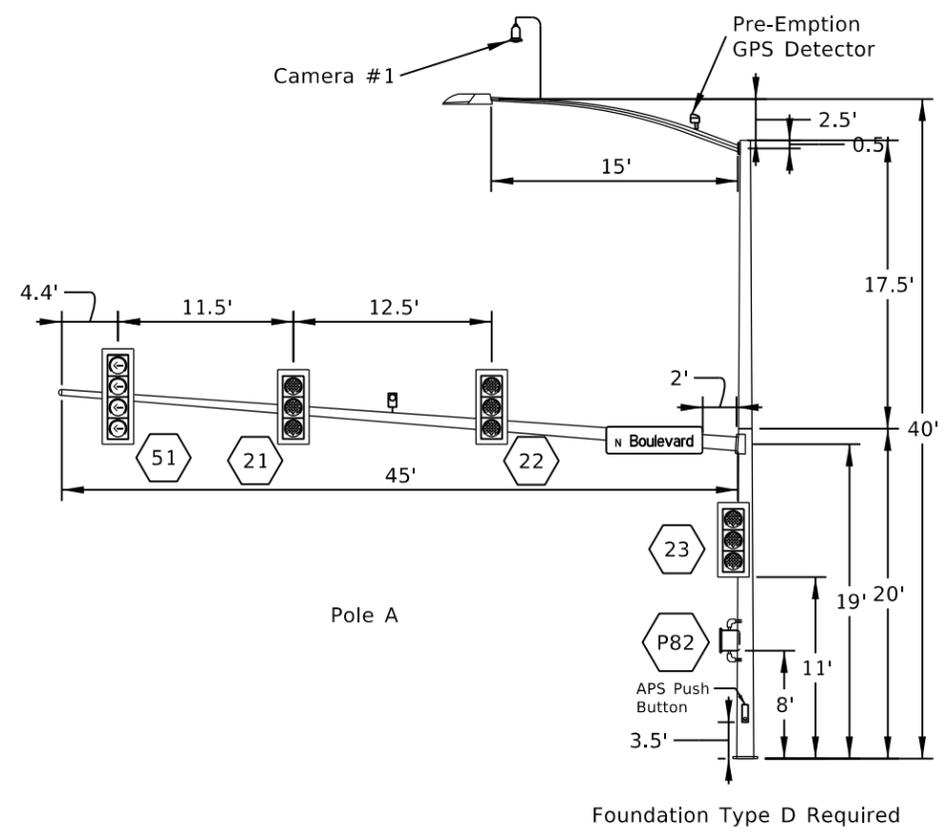
COUNTY BONNEVILLE

KEY NUMBER 22008

SHEET 30 OF 61



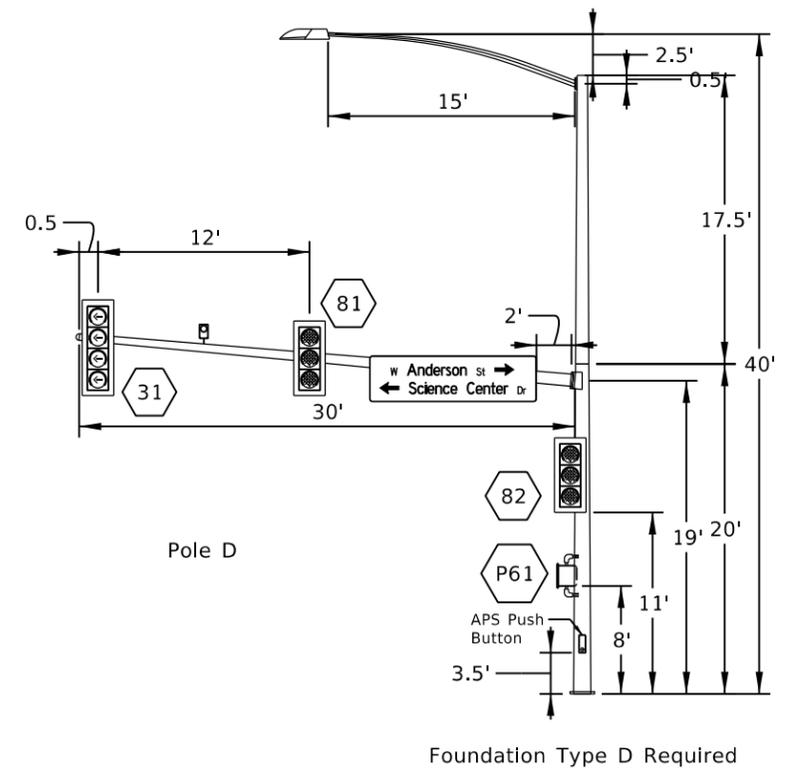
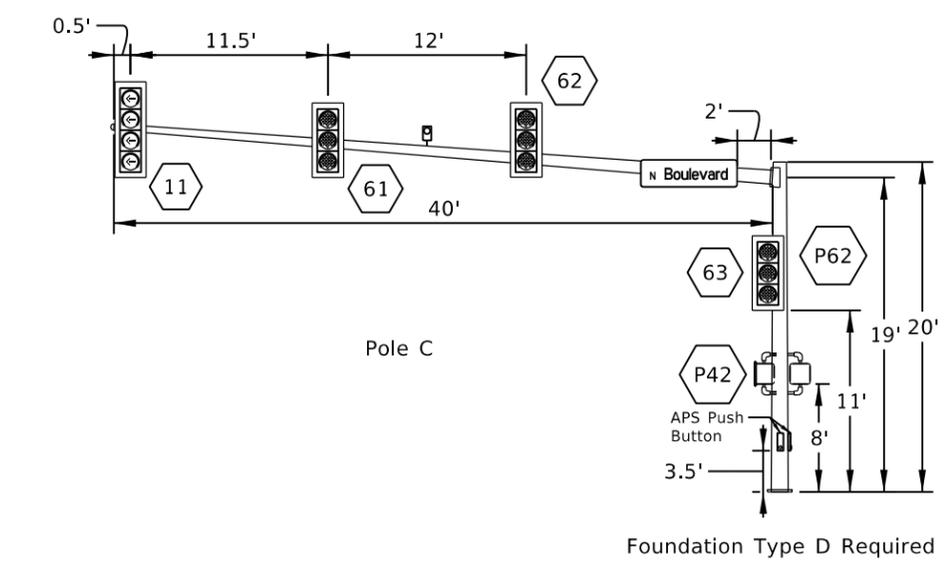




Signal Pole w/ Mast Arm	
Vehicle Signal Head	
Pedestrian Signal Head	
Gridsmart Detection Camera	
Pre-Emption GPS Detector	
Mast Arm Sign	
Luminaire w/ Mast Arm	
Signal Cabinet	
Service Pedestal	
Battery Backup System	
PGC Composite J-Box	
Signal Conduit	
Detection Conduit	
Illumination Conduit	

Wire Note	1
Construction Note	1
Signal Head Number	12
Pedestrian Head Number	12P



- Notes:
1. The video detection camera locations shown are approximate.
  2. Permanent video camera locations will be determined by a manufacturer's field site survey.
  3. Drawing not to scale.
  4. Field verify any conflicts with overhead power lines before ordering signal poles.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED R. TELFORD  
 DESIGN CHECKED B. BURKE  
 DETAILED R. TELFORD  
 DRAWING CHECKED B. BURKE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME 22008\_pole\_001.DGN  
 DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**  
 YOUR Safety-YOUR Mobility-YOUR Economic Opportunity

**Horrocks.**

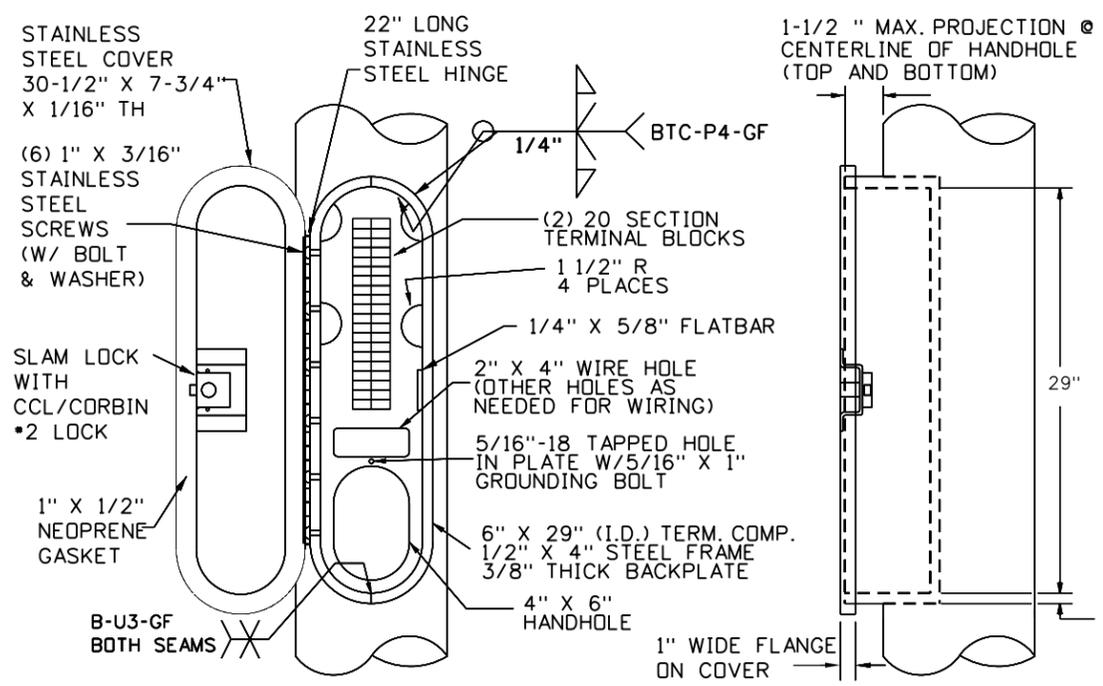
PROJECT NO. A022(008)

SIGNAL POLE MOUNTING DETAILS  
 NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS

ENGLISH  
 COUNTY BONNEVILLE  
 KEY NUMBER 22008  
 SHEET 32 OF 61



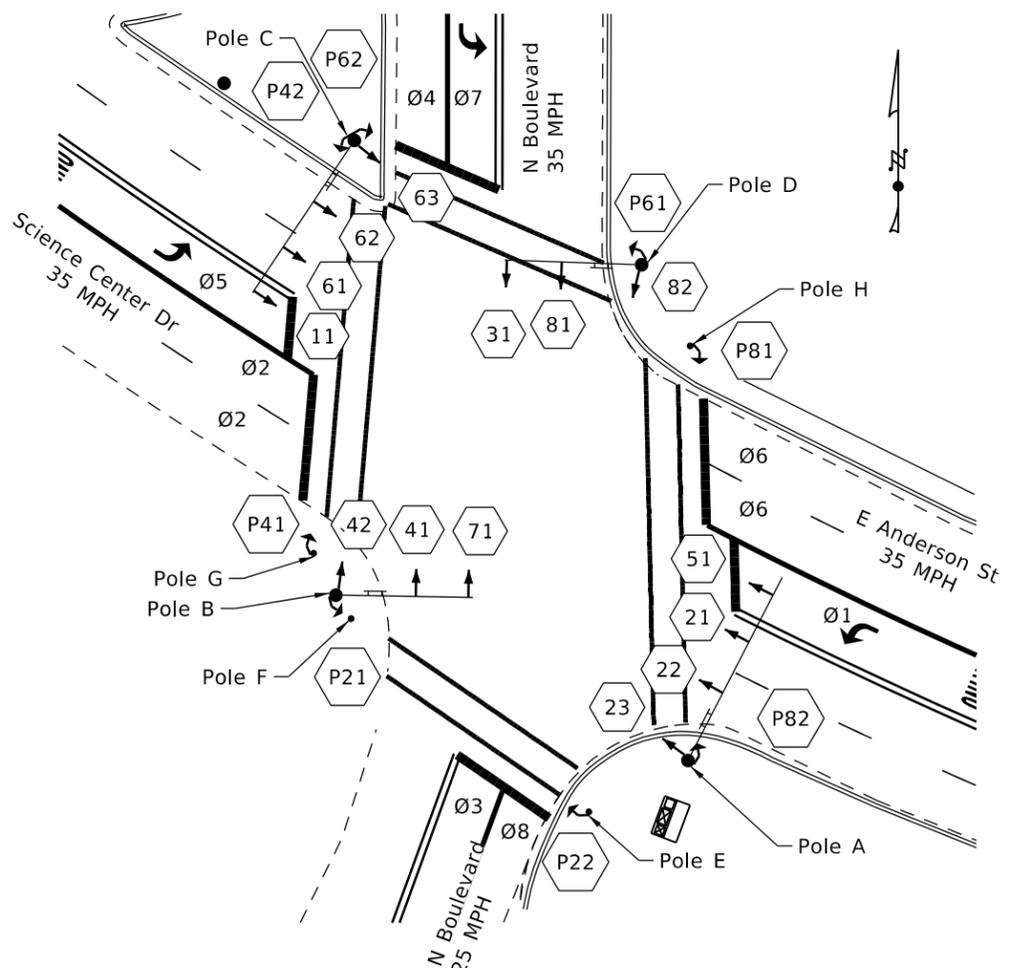
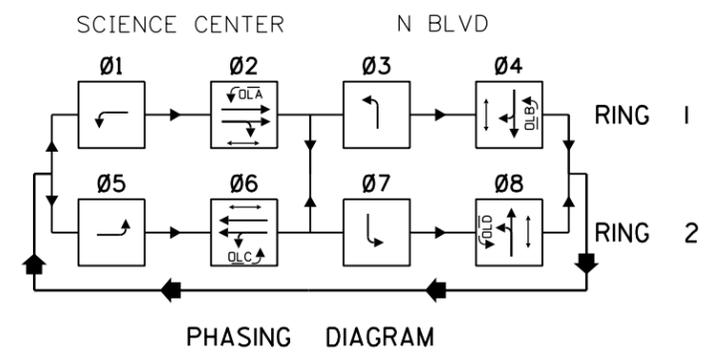




RECESSED TERMINAL COMPARTMENT DETAIL

PHASE	VEHICLE HEADS								PEDESTRIAN HEADS				CLEARANCE
	11	21-22-23	31	41-42	51	61-62-63	71	81-82	21-22	41-42	61-62	81-82	
Ø1	←G	R	←R	R	←R	R	←R	R	DW	DW	DW	DW	VEHICLE
Ø2	←Y	R	←R	R	←R	R	←R	R	DW	DW	DW	DW	
Ø3	←FY	G	←R	R	←R	R	←R	R	W	DW	DW	DW	PEDESTRIAN
	←Y	Y	←R	R	←R	R	←R	R	FDW	DW	DW	DW	
Ø4	←R	R	←G	R	←R	R	←R	R	DW	DW	DW	DW	VEHICLE
	←R	R	←Y	R	←R	R	←R	R	DW	DW	DW	DW	
Ø5	←R	R	←FY	G	←R	R	←R	R	DW	W	DW	DW	PEDESTRIAN
	←R	R	←Y	Y	←R	R	←R	R	DW	FDW	DW	DW	
Ø6	←R	R	←R	R	←G	R	←R	R	DW	DW	DW	DW	VEHICLE
	←R	R	←R	R	←Y	R	←R	R	DW	DW	DW	DW	
Ø7	←R	R	←R	R	←FY	G	←R	R	DW	DW	W	DW	PEDESTRIAN
	←R	R	←R	R	←Y	Y	←R	R	DW	DW	FDW	DW	
Ø8	←R	R	←R	R	←R	R	←G	R	DW	DW	DW	DW	VEHICLE
	←R	R	←R	R	←R	R	←Y	R	DW	DW	DW	DW	
FLASHING	←R	R	←R	R	←R	R	←FY	G	DW	DW	DW	W	PEDESTRIAN
	←R	R	←R	R	←R	R	←Y	R	DW	DW	DW	DW	

SIGNAL SEQUENCE CHART



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED R. TELFORD  
 DESIGN CHECKED B. BURKE  
 DETAILED R. TELFORD  
 DRAWING CHECKED B. BURKE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME 22008\_phase.001.DGN  
 DRAWING DATE: January 22, 2025

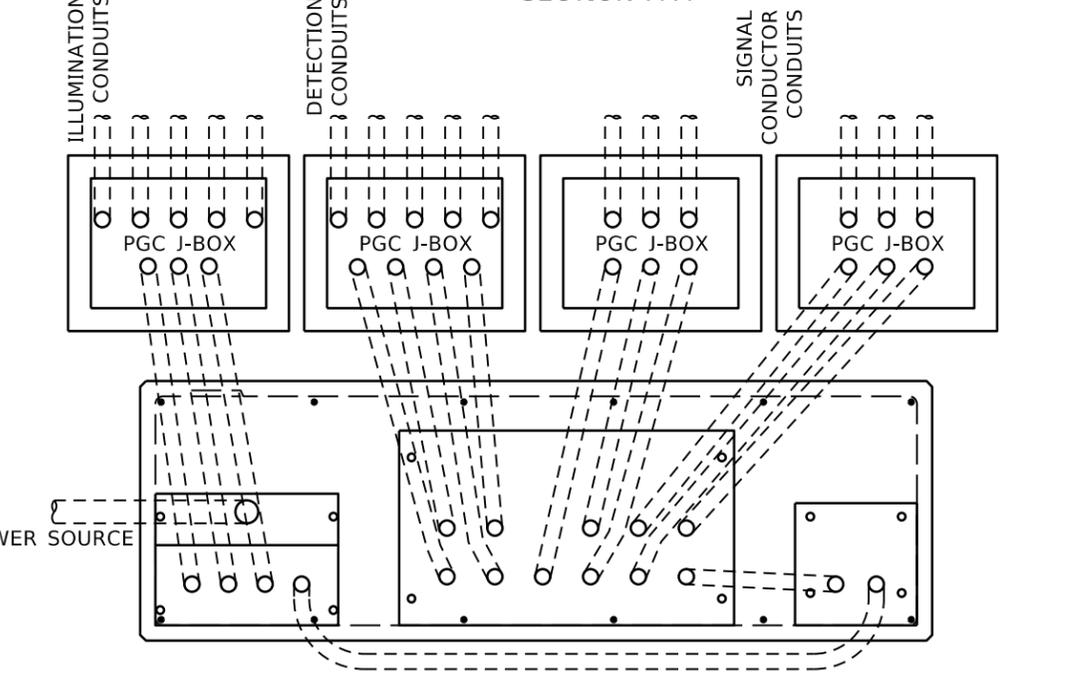
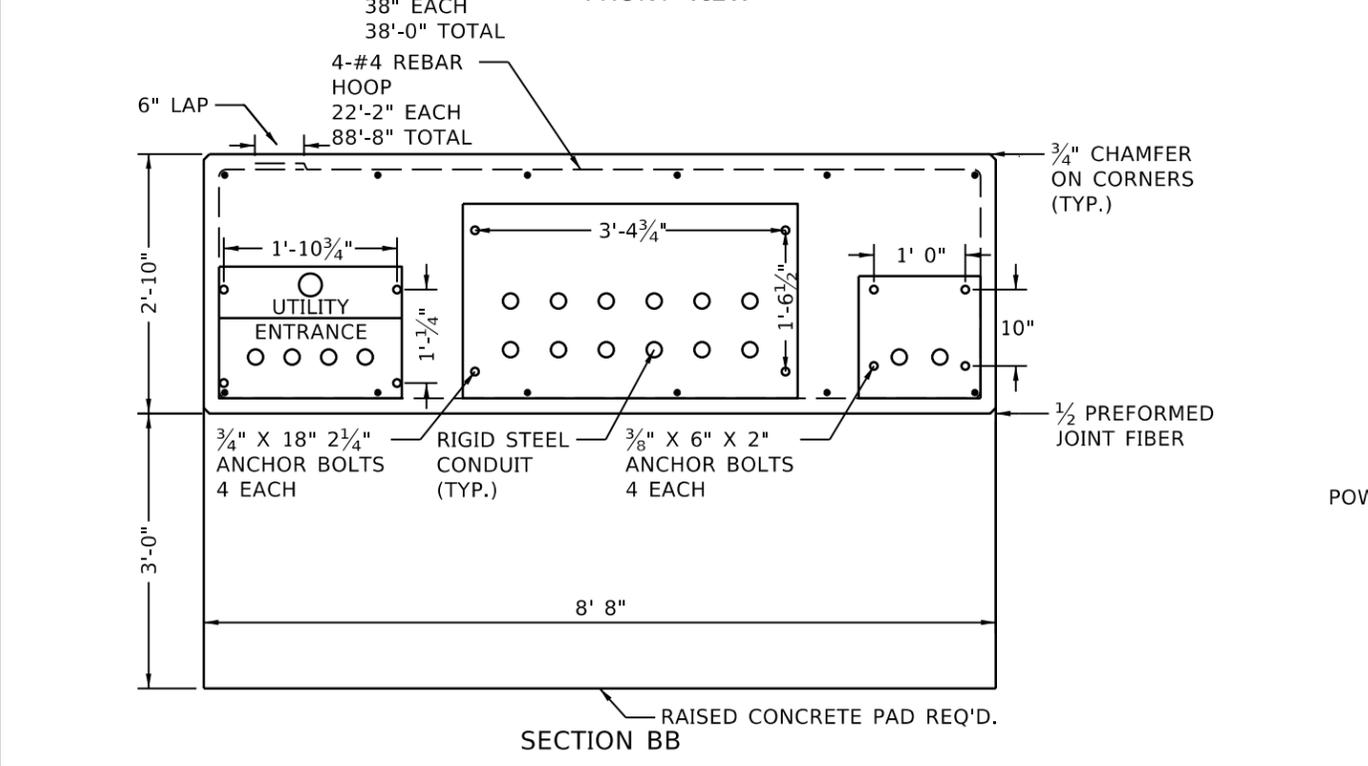
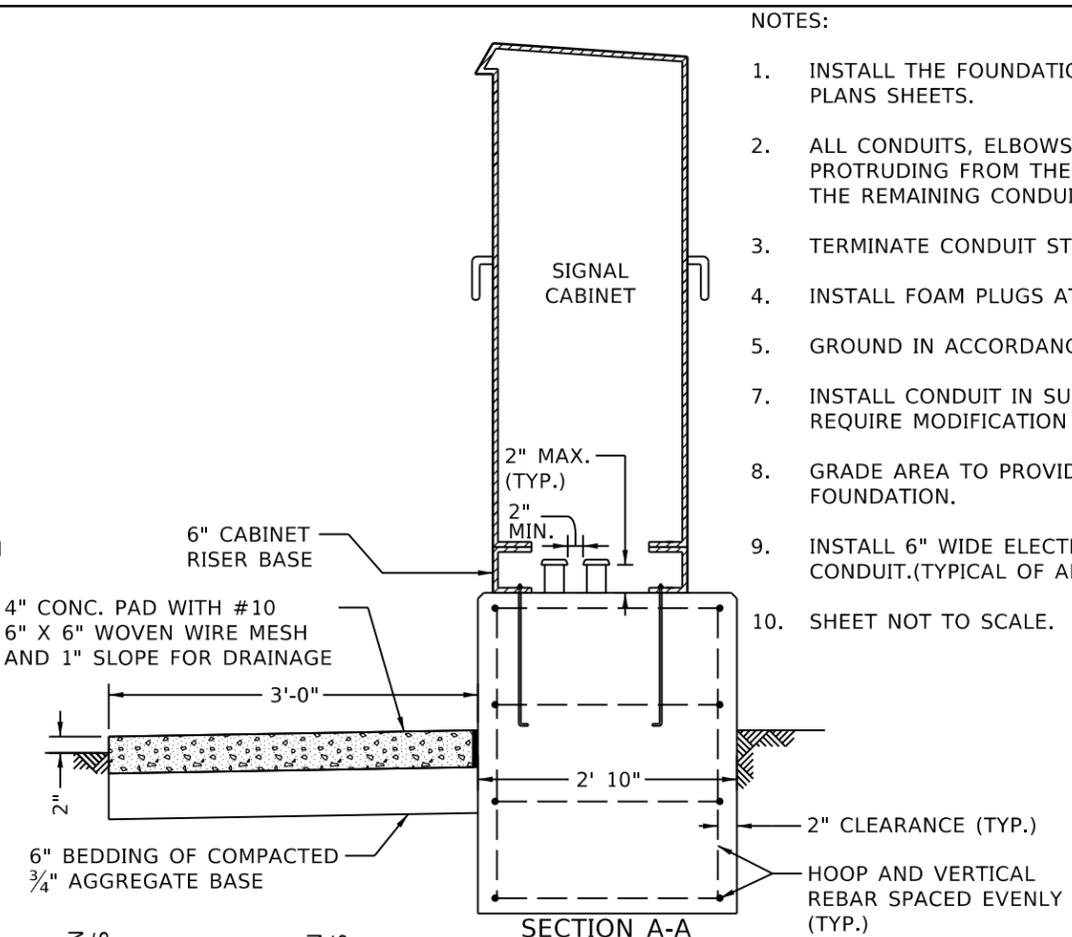
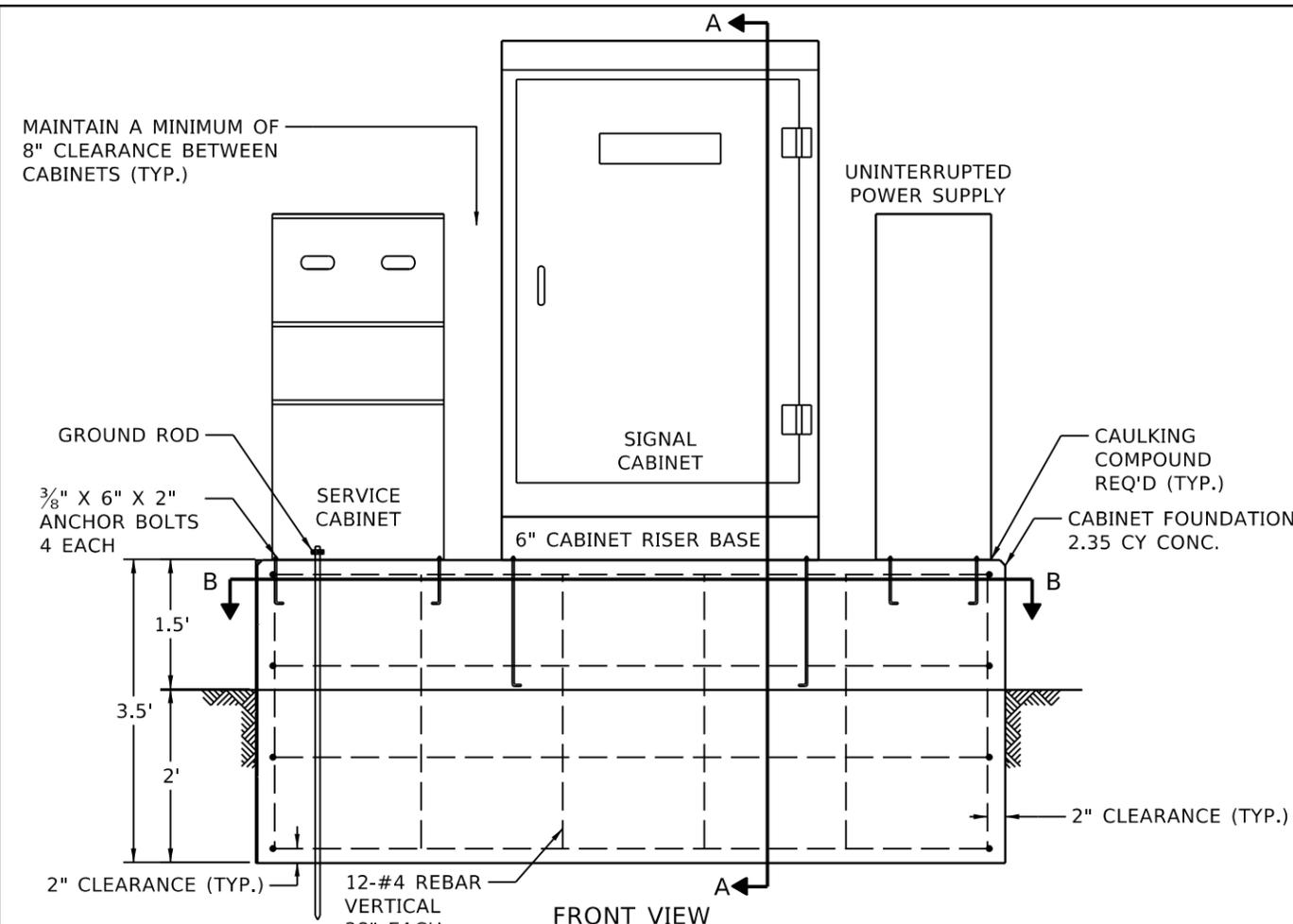
IDAHO TRANSPORTATION DEPARTMENT  
 YOUR Safety-YOUR Mobility-YOUR Economic Opportunity  
 Horrocks.

PROJECT NO. A022(008)

SIGNAL PHASING DIAGRAM  
 NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS

ENGLISH  
 COUNTY BONNEVILLE  
 KEY NUMBER 22008  
 SHEET 34 OF 61





- NOTES:
1. INSTALL THE FOUNDATION AS INDICATED ON THE PROJECT PLANS SHEETS.
  2. ALL CONDUITS, ELBOWS AND COUPLINGS WITHIN AND PROTRUDING FROM THE FOUNDATION SHALL BE RIGID STEEL. THE REMAINING CONDUITS SHALL BE AS SHOWN ON THE PLANS.
  3. TERMINATE CONDUIT STUBOUTS WITH A STEEL BONDING BUSHING.
  4. INSTALL FOAM PLUGS AT BOTH ENDS OF SPARE CONDUITS.
  5. GROUND IN ACCORDANCE WITH N.E.C.
  7. INSTALL CONDUIT IN SUCH A MANNER AS TO NOT CAUSE OR REQUIRE MODIFICATION OF THE CABINET.
  8. GRADE AREA TO PROVIDE DRAINAGE AWAY FORM CABINET FOUNDATION.
  9. INSTALL 6" WIDE ELECTRICAL HAZARD TAPE 1'-0" ABOVE CONDUIT.(TYPICAL OF ALL CONDUIT PLACED IN THE GROUND)
  10. SHEET NOT TO SCALE.

NOTE:

THE COUNDUIT FROM THE POWER SOURCE SHALL BE 3". ALL OTHER CONDUIT SHALL BE 2". ALL CONDUITS ENCASED OR PROTRUDING FROM THE CONCRETE FOUNDATION SHALL BE RIGID STEEL.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED R. TELFORD

DESIGN CHECKED B. BURKE

DETAILED R. TELFORD

DRAWING CHECKED B. BURKE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME 22008\_cab det 1.DGN

DRAWING DATE: January 22, 2025

IDAHO TRANSPORTATION DEPARTMENT

YOUR Safety-YOUR Mobility-YOUR Economic Opportunity

Horrocks.

PROJECT NO. A022(008)

CABINET FOUNDATION CONDUIT LAYOUT

NHS-7046, SCIENCE CENTER; N BLVD TO HOLMES, IDAHO FALLS

ENGLISH

COUNTY BONNEVILLE

KEY NUMBER 22008

SHEET 35 OF 61



SERVICE CABINET SCHEDULE

ITEM	CLASS "B"
① MAIN BREAKER	(SEE SCHEDULE)
② CONTROL BREAKER	1P-15A 120/240 VOLT
③ TEST SWITCH	SPST-15A 120/240 VOLT
④ LIGHTING BRANCH BREAKER	2P-120/240 VOLT (SEE SCHEDULE)
⑤ SIGNAL CONTROL BREAKER	1P-120/240 VOLT (SEE SCHEDULE)
⑥ NEMA 14-50R	120/240 VOLT
⑦ LIGHTING CONTACTOR	8P (ANY COMBINATION)
⑧ FLASHER CONTROL BREAKER	1P-120/240 VOLT (SEE SCHEDULE)
⑨ RECEPTACLE BRANCH BREAKER	2P-120/240 VOLT (SEE SCHEDULE)

BREAKER RATING SCHEDULE

CLASS "B"	
ITEM	NO. OF LIGHTING CIRCUITS
MAIN BREAKER	100 AMP 2P
LIGHTING BRANCH BREAKER	30 AMP 2P
SIGNAL CONTROL BREAKER	60 AMP 1P
LIGHTING CONTACTOR	30 AMP 4P
FLASHER CONTROL BREAKER	
SERVICE WIRE	NO. 3 THWN

NOTE

IDENTIFICATION LABELS SHALL BE REQUIRED FOR BOTH BRANCH BREAKERS. LIGHTING BRANCH BREAKER LABELS SHALL READ: "LIGHTING CIRCUIT NO. (SEE PLANS)." SIGNAL BRANCH BREAKER LABELS SHALL READ: "SIGNAL AT (IDENTIFY TWO LEGS OF THE INTERSECTION)."

NOTES:

- SERVICE CABINETS SHALL BE NEMA TYPE 3R. TO BE FURNISHED WITH A PADLOCK HASP.
- DEAD FRONT CONSTRUCTION IS REQUIRED ON ALL CABINETS.
- PLUG-IN TYPE BREAKERS SHALL BE USED ON "B" SERVICES. MAIN BREAKERS SHALL BE BOLT RETAINED.
- PRESSURE TYPE TERMINALS SHALL BE REQUIRED FOR #8 THROUGH #2 AWG. WIRE.
- ALL SERVICES SHALL BE U.L. LABELED FOR MAXIMUM 100 AMP BUS RATING, AND "APPROVED FOR SERVICE ENTRANCE EQUIPMENT."
- THE MAIN BREAKER LABEL SHALL BE MADE OF RED ON WHITE PLASTIC LAMINATE. THE BRANCH BREAKER LABELS SHALL BE MADE OF BLACK ON WHITE PLASTIC LAMINATE. THE LEGENDS SHALL BE ENGRAVED INTO THE STRIP SO AS TO PROVIDE WHITE OR RED LEGEND ON THE REQUIRED BACKGROUND. THE LABELS SHALL BE PERMANENTLY ATTACHED TO THE DEAD FRONT, NEXT TO THE CORRESPONDING BREAKERS.
- LIGHTING CONTACTORS, LIGHTING & SIGNAL BRANCH CIRCUIT BREAKERS ARE FACTORY INSTALLED.
- BRANCH CIRCUIT WIRE AND PHOTOELECTRIC CONTROL TO BE SUPPLIED BY THE CONTRACTOR.
- ALL BUSSING TO BE 100 AMP RATED.
- WIRING SHALL BE THWN/MTW 600V 90°C RATED.

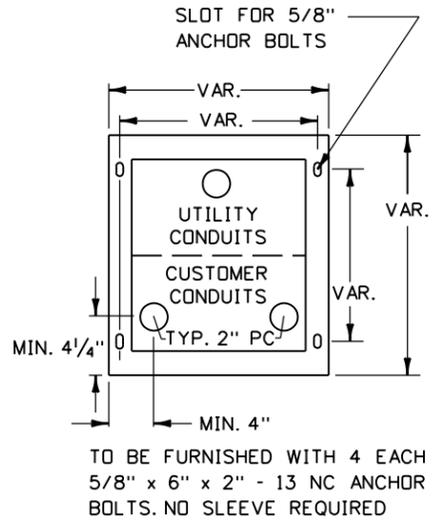
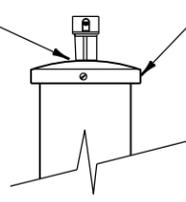
NOTE

WHEN SIGNAL & LIGHTING BRANCH BREAKERS ARE INSTALLED IN SAME PANEL BOARD, THE MAIN BREAKER SHALL BE PERMANENTLY LABELED AS FOLLOWS:

**WARNING**  
DO NOT USE MAIN BREAKER AS A DISCONNECT  
THIS PANEL BOARD CONTAINS ONE OR MORE BRANCH BREAKERS CONTROLLING A SIGNALIZED INTERSECTION

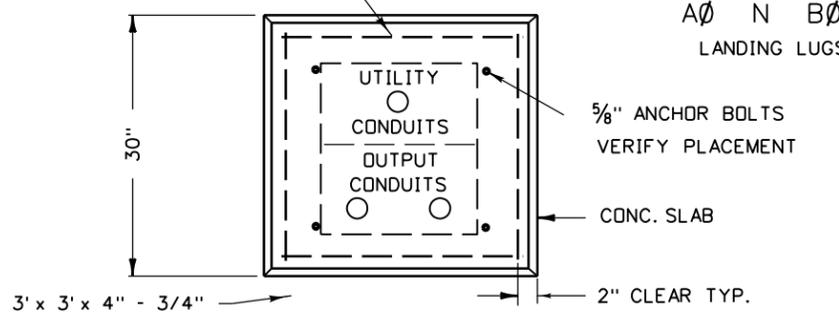
ALTERNATE LOCATION

POLE TOP MOUNTING FOR PHOTOELECTRIC CELL  
PHOTOELECTRIC CELL TWIST LOCK RECEPTACLE REQUIRED. MOUNTED IN UPPER RIGHT SIDE OF CUSTOMER SECTION



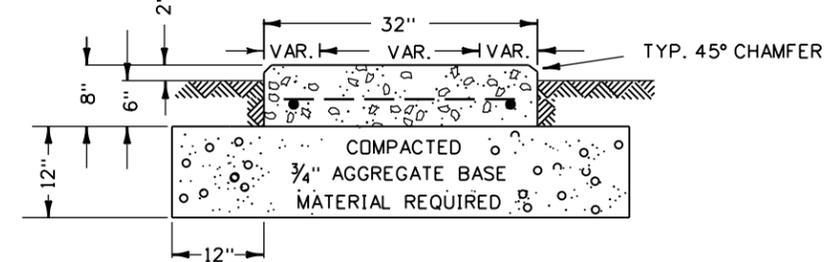
PEDESTAL FLANGE MOUNTING DETAIL

4 EA. NO. 4 STEEL REINFORCING BARS REQUIRED

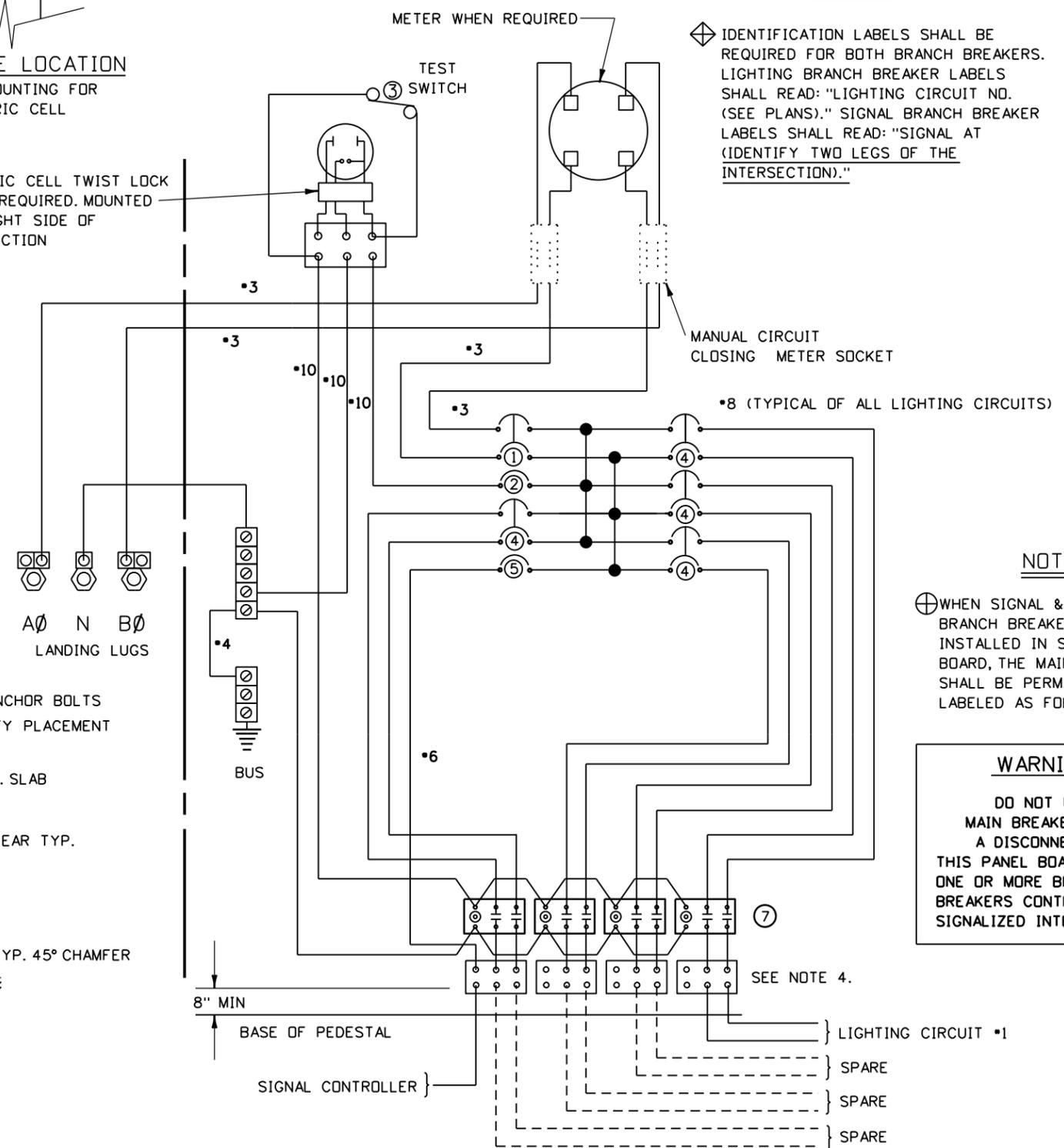


TOP VIEW

3' x 3' x 4" - 3/4" GRAVEL REQUIRED IN FRONT OF FOUNDATION



FRONT VIEW NARROW FOUNDATION



SHOW UNUSED LIGHTING CIRCUITS AS DASHED LINES AND LABEL AS "SPARE"

TYPE 1 SERVICE

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	R. TELFORD	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED	B. BURKE	
DETAILED	R. TELFORD	CADD FILE NAME 22008_td04_001.DGN
DRAWING CHECKED	B. BURKE	DRAWING DATE: January 22, 2025

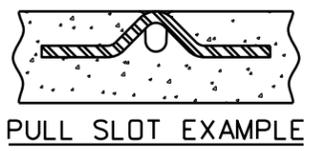
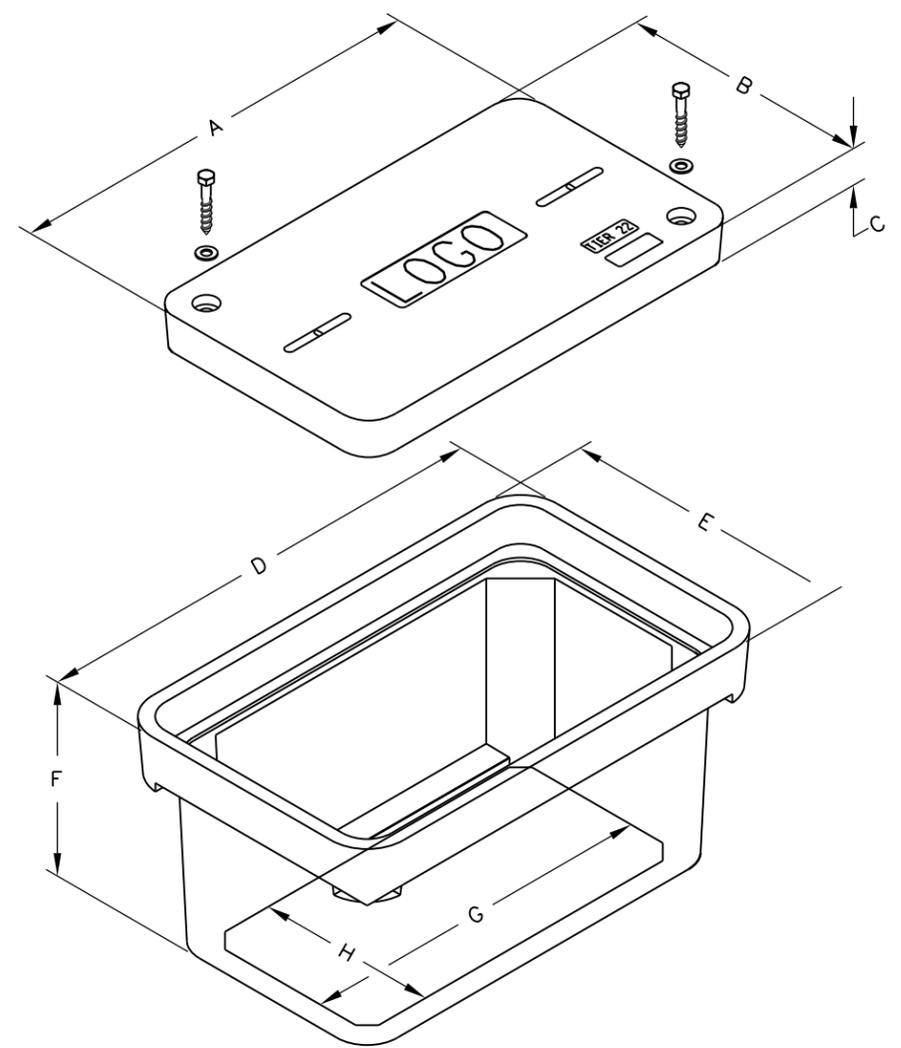
**IDAHO TRANSPORTATION DEPARTMENT**  
YOUR Safety - YOUR Mobility - YOUR Economic Opportunity

PROJECT NO.	A022(008)
-------------	-----------

SERVICE CABINET DETAILS  
NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS

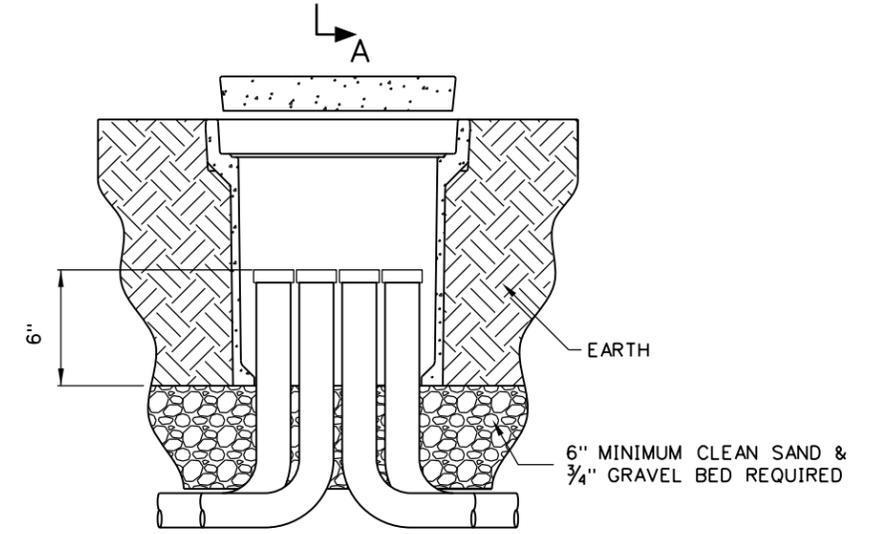
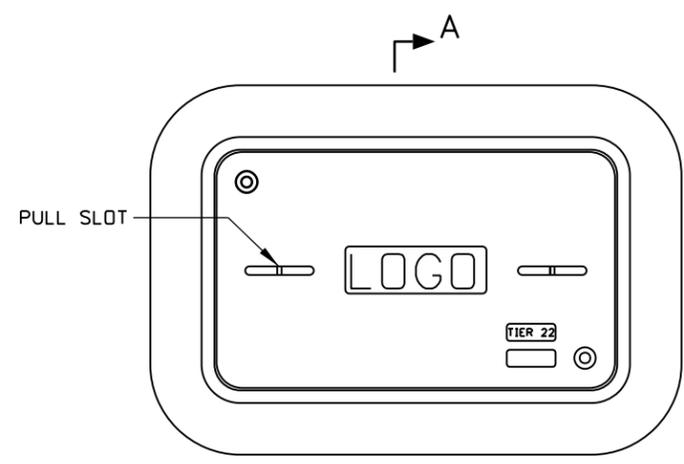
ENGLISH	COUNTY BONNEVILLE
KEY NUMBER	22008
SHEET	36 OF 61





**LOGO OPTIONS**

- 1. BLANK
  - 2. SIGNAL
  - 3. LIGHTING LOGO
- IS REQUIRED AS PER NEC.



**SECTION A-A**  
**TYPICAL JUNCTION BOX**

**JUNCTION BOX NOTE:**

POLYMER CONCRETE JUNCTION BOXES SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE IDAHO TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SUBSECTION 713.06, COMPOSITE JUNCTION BOXES.

TABLE OF DIMENSIONS (NOMINAL)									
TYPE	DESCRIPTION	DIMENSIONS							
		A	B	C	D	E	F	G	H
PGB	JUNCTION BOX - (13" x 24" x 18")	23 <sup>1</sup> / <sub>4</sub> "	13 <sup>3</sup> / <sub>4</sub> "	2"	25"	15 <sup>1</sup> / <sub>2</sub> "	18"	21 <sup>1</sup> / <sub>4</sub> "	11 <sup>1</sup> / <sub>2</sub> "
PGC	JUNCTION BOX - (17" x 30" x 18")	30 <sup>1</sup> / <sub>2</sub> "	17 <sup>1</sup> / <sub>2</sub> "	2"	32 <sup>1</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>4</sub> "	18"	28 <sup>1</sup> / <sub>2</sub> "	15 <sup>1</sup> / <sub>2</sub> "
PGD	JUNCTION BOX - (24" x 36" x 24")	30 <sup>5</sup> / <sub>8</sub> "	24"	3"	37 <sup>5</sup> / <sub>8</sub> "	26"	24"	29 <sup>3</sup> / <sub>4</sub> "	20 <sup>3</sup> / <sub>4</sub> "

NOT TO SCALE

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED R. TELFORD  
 DESIGN CHECKED B. BURKE  
 DETAILED R. TELFORD  
 DRAWING CHECKED B. BURKE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME 22008 td12 001.DGN  
 DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

**Horrocks.**

PROJECT NO.  
A022(008)

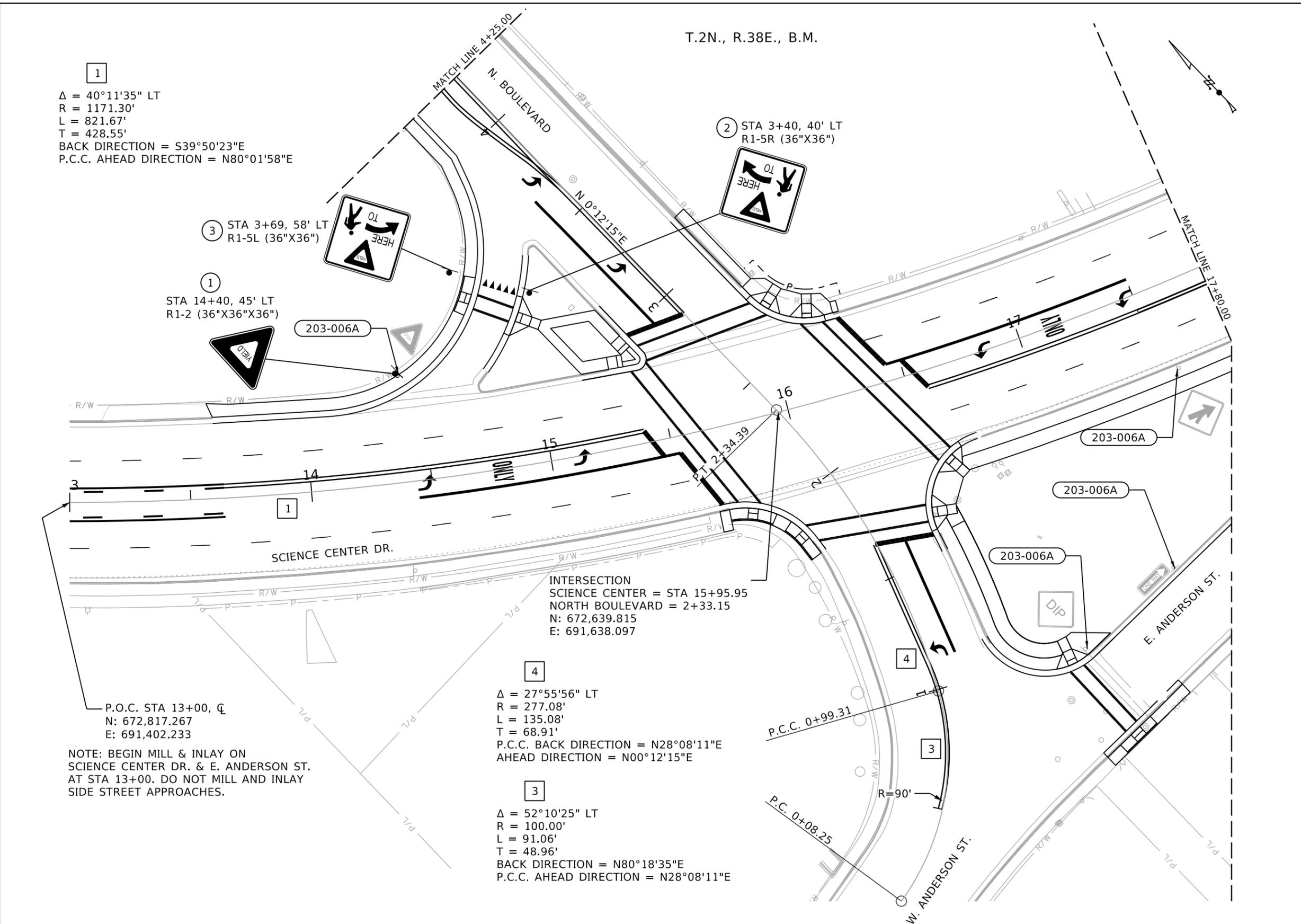
JUNCTION BOX DETAILS  
 NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS

ENGLISH  
 COUNTY BONNEVILLE  
 KEY NUMBER 22008  
 SHEET 37 OF 61









T.2N., R.38E., B.M.

1  
 $\Delta = 40^\circ 11' 35''$  LT  
 $R = 1171.30'$   
 $L = 821.67'$   
 $T = 428.55'$   
 BACK DIRECTION =  $S39^\circ 50' 23''$ E  
 P.C.C. AHEAD DIRECTION =  $N80^\circ 01' 58''$ E

3 STA 3+69, 58' LT  
 R1-5L (36"X36")

1 STA 14+40, 45' LT  
 R1-2 (36"X36"X36")

2 STA 3+40, 40' LT  
 R1-5R (36"X36")

INTERSECTION  
 SCIENCE CENTER = STA 15+95.95  
 NORTH BOULEVARD = 2+33.15  
 N: 672,639.815  
 E: 691,638.097

4  
 $\Delta = 27^\circ 55' 56''$  LT  
 $R = 277.08'$   
 $L = 135.08'$   
 $T = 68.91'$   
 P.C.C. BACK DIRECTION =  $N28^\circ 08' 11''$ E  
 AHEAD DIRECTION =  $N00^\circ 12' 15''$ E

3  
 $\Delta = 52^\circ 10' 25''$  LT  
 $R = 100.00'$   
 $L = 91.06'$   
 $T = 48.96'$   
 BACK DIRECTION =  $N80^\circ 18' 35''$ E  
 P.C.C. AHEAD DIRECTION =  $N28^\circ 08' 11''$ E

P.O.C. STA 13+00,  $\text{C}$   
 N: 672,817.267  
 E: 691,402.233

NOTE: BEGIN MILL & INLAY ON  
 SCIENCE CENTER DR. & E. ANDERSON ST.  
 AT STA 13+00. DO NOT MILL AND INLAY  
 SIDE STREET APPROACHES.

203-006A	REMOVAL OF SIGN
1 EACH	STA 14+41, 44' LT
1 EACH	STA 16+85, 130' RT
1 EACH	STA 17+56, 35' RT
1 EACH	STA 17+26, 111' RT

NOTES:  
 1. RETAIN & PROTECT ALL EXISTING  
 SIGNS UNLESS OTHERWISE NOTED.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED T. WILLIAMS  
 DESIGN CHECKED B. BURKE  
 DETAILED T. WILLIAMS  
 DRAWING CHECKED B. BURKE

SCALES SHOWN  
 ARE FOR 11" X 17"  
 PRINTS ONLY

CADD FILE NAME  
 22008 traf 002.dgn

DRAWING DATE:  
 June 30, 2025

**IDAHO**  
**TRANSPORTATION**  
**DEPARTMENT**

YOUR Safety-YOUR Mobility-YOUR Economic Opportunity

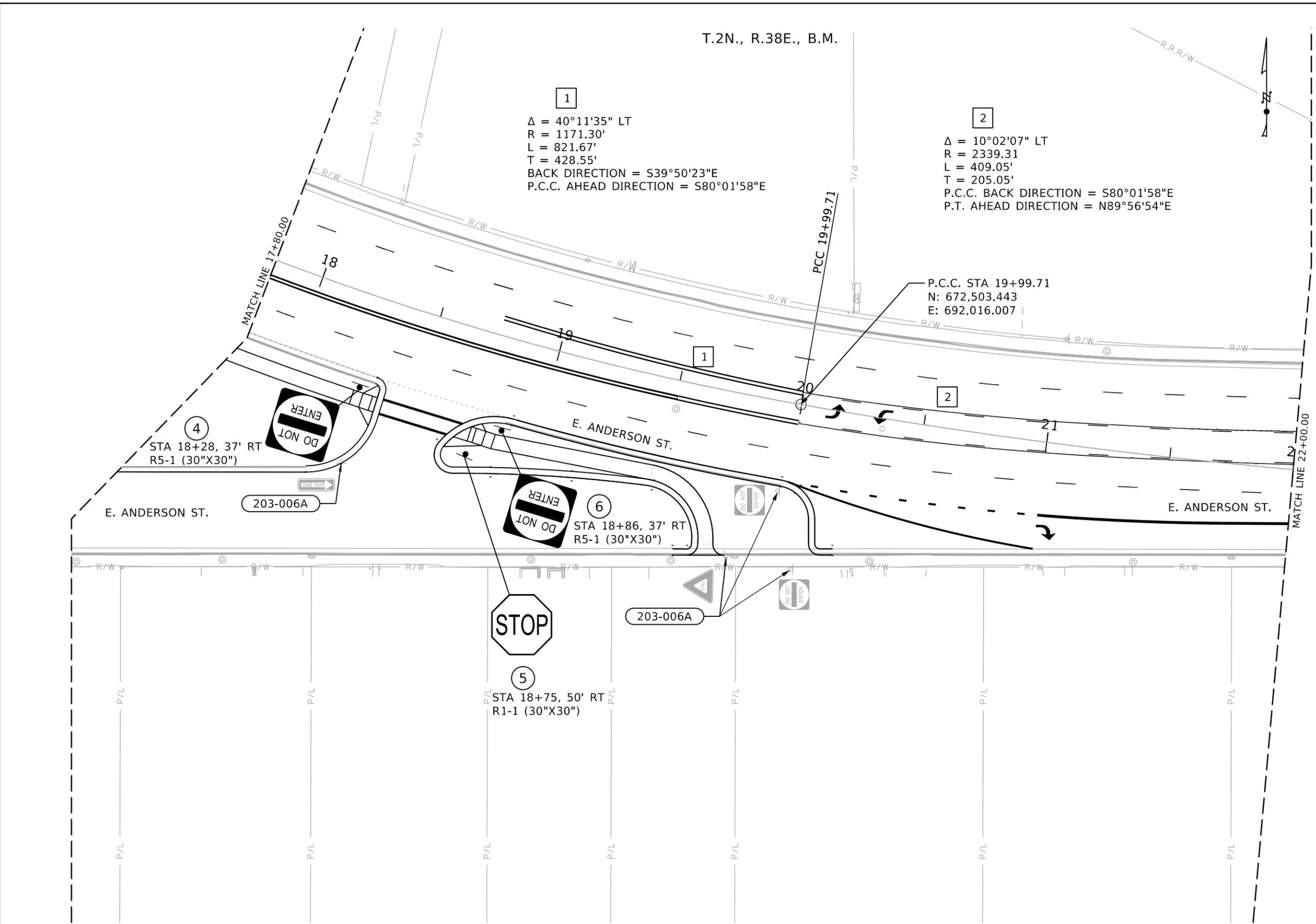
**Horrocks.**

PROJECT NO.  
 A022(008)

SIGNING & HORIZONTAL CONTROL  
 NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS

ENGLISH  
 COUNTY BONNEVILLE  
 KEY NUMBER 22008  
 SHEET 40 OF 61





203-006A	REMOVAL OF SIGN
1 EACH	STA 18+30, 68' RT
1 EACH	STA 19+81, 65 RT
1 EACH	STA 19+96, 36 RT
1 EACH	STA 20+07, 66 RT

NOTES:  
 1. RETAIN & PROTECT ALL EXISTING SIGNS UNLESS OTHERWISE NOTED.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	T. WILLIAMS
DESIGN CHECKED	B. BURKE
DETAILED	T. WILLIAMS
DRAWING CHECKED	B. BURKE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME: 22008 traf 002.dgn  
 DRAWING DATE: January 22, 2025

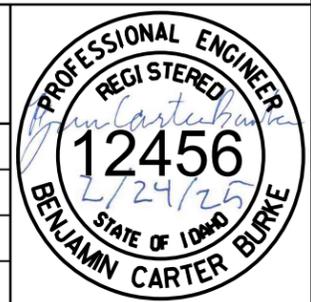
**IDAHO TRANSPORTATION DEPARTMENT**  
 YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

**Horrocks.**

PROJECT NO.  
 A022(008)

SIGNING & HORIZONTAL CONTROL  
 NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS

ENGLISH  
 COUNTY BONNEVILLE  
 KEY NUMBER 22008  
 SHEET 41 OF 61

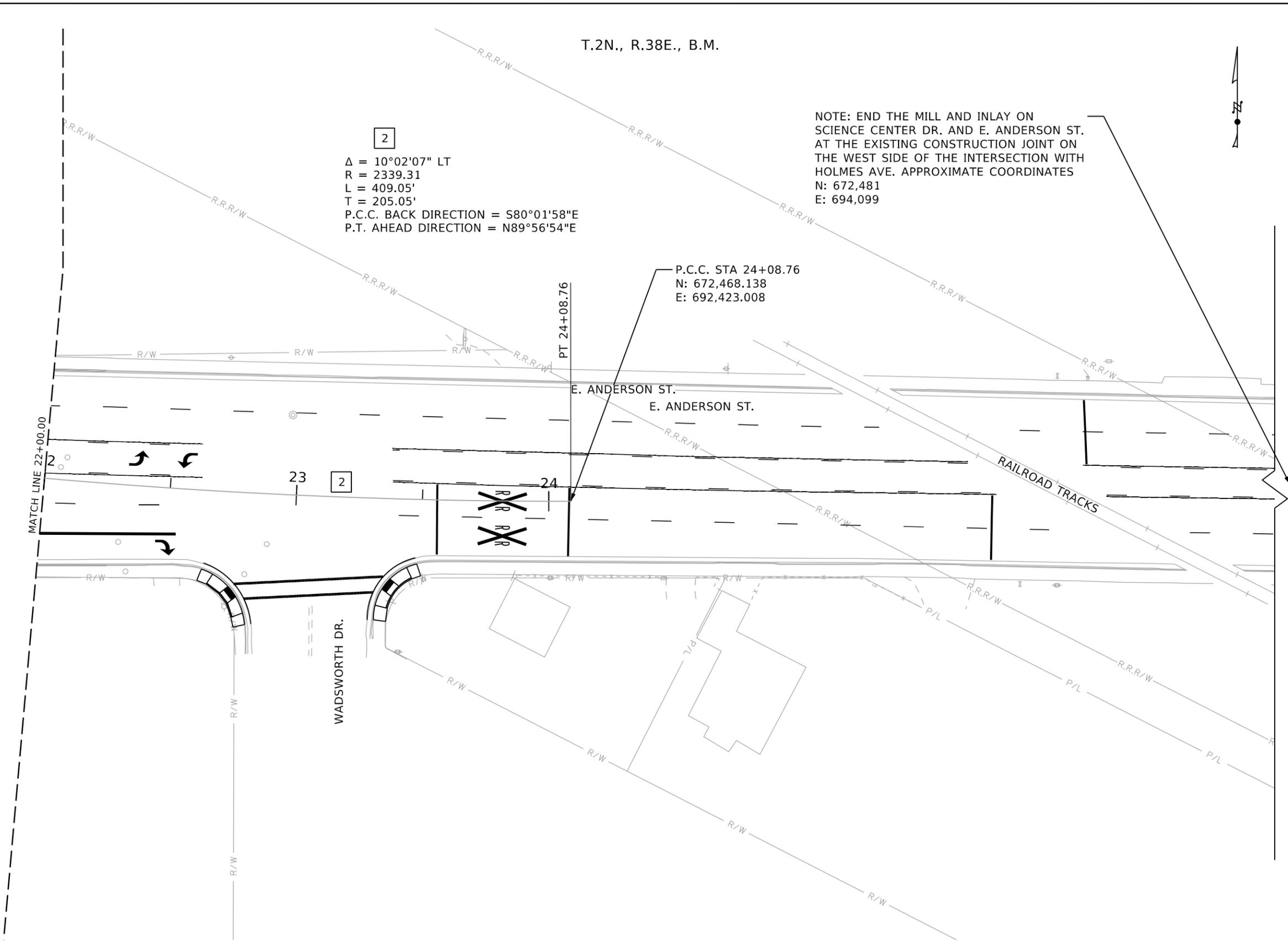


T.2N., R.38E., B.M.

2  
 $\Delta = 10^{\circ}02'07''$  LT  
 R = 2339.31  
 L = 409.05'  
 T = 205.05'  
 P.C.C. BACK DIRECTION = S80°01'58"E  
 P.T. AHEAD DIRECTION = N89°56'54"E

NOTE: END THE MILL AND INLAY ON SCIENCE CENTER DR. AND E. ANDERSON ST. AT THE EXISTING CONSTRUCTION JOINT ON THE WEST SIDE OF THE INTERSECTION WITH HOLMES AVE. APPROXIMATE COORDINATES  
 N: 672,481  
 E: 694,099

P.C.C. STA 24+08.76  
 N: 672,468.138  
 E: 692,423.008



NOTES:  
 1. RETAIN & PROTECT ALL EXISTING SIGNS UNLESS OTHERWISE NOTED.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	T. WILLIAMS	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED	B. BURKE	
DETAILED	T. WILLIAMS	CADD FILE NAME 22008 traf 002.dgn
DRAWING CHECKED	B. BURKE	DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

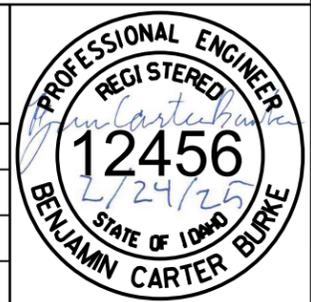
YOUR Safety → YOUR Mobility → YOUR Economic Opportunity

**Horrocks.**

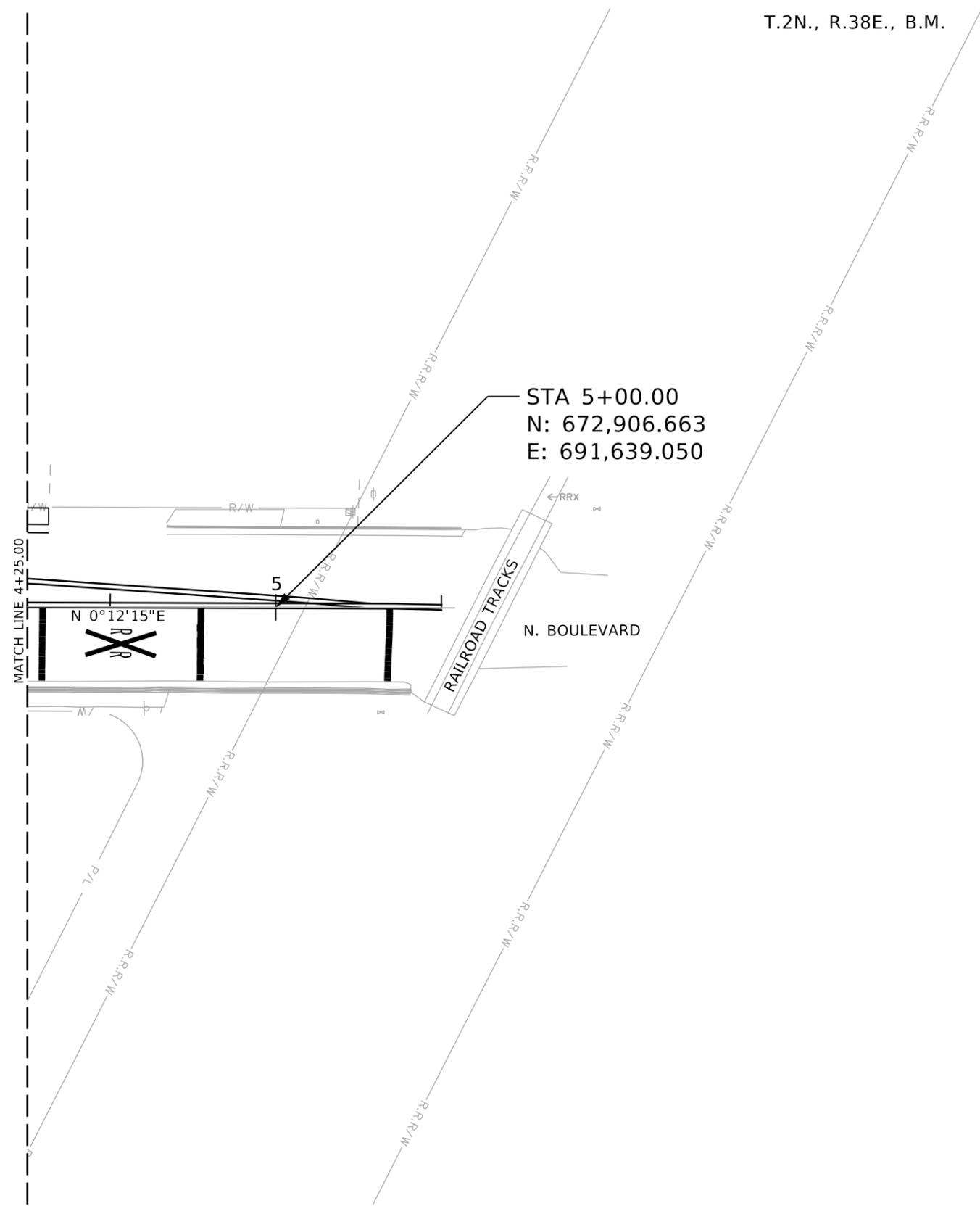
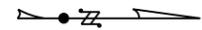
PROJECT NO.  
**A022(008)**

SIGNING & HORIZONTAL CONTROL  
**NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS**

**ENGLISH**  
 COUNTY BONNEVILLE  
 KEY NUMBER 22008  
 SHEET 42 OF 61



T.2N., R.38E., B.M.



NOTES:  
 1. RETAIN & PROTECT ALL EXISTING SIGNS UNLESS OTHERWISE NOTED.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	T. WILLIAMS	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED	B. BURKE	
DETAILED	T. WILLIAMS	CADD FILE NAME 22008 traf 002.dgn
DRAWING CHECKED	B. BURKE	DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety→YOUR Mobility→YOUR Economic Opportunity



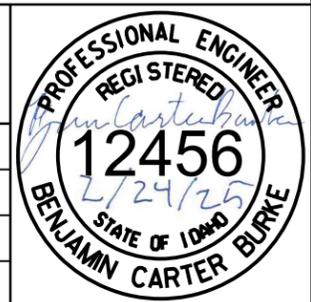
**Horrocks.**

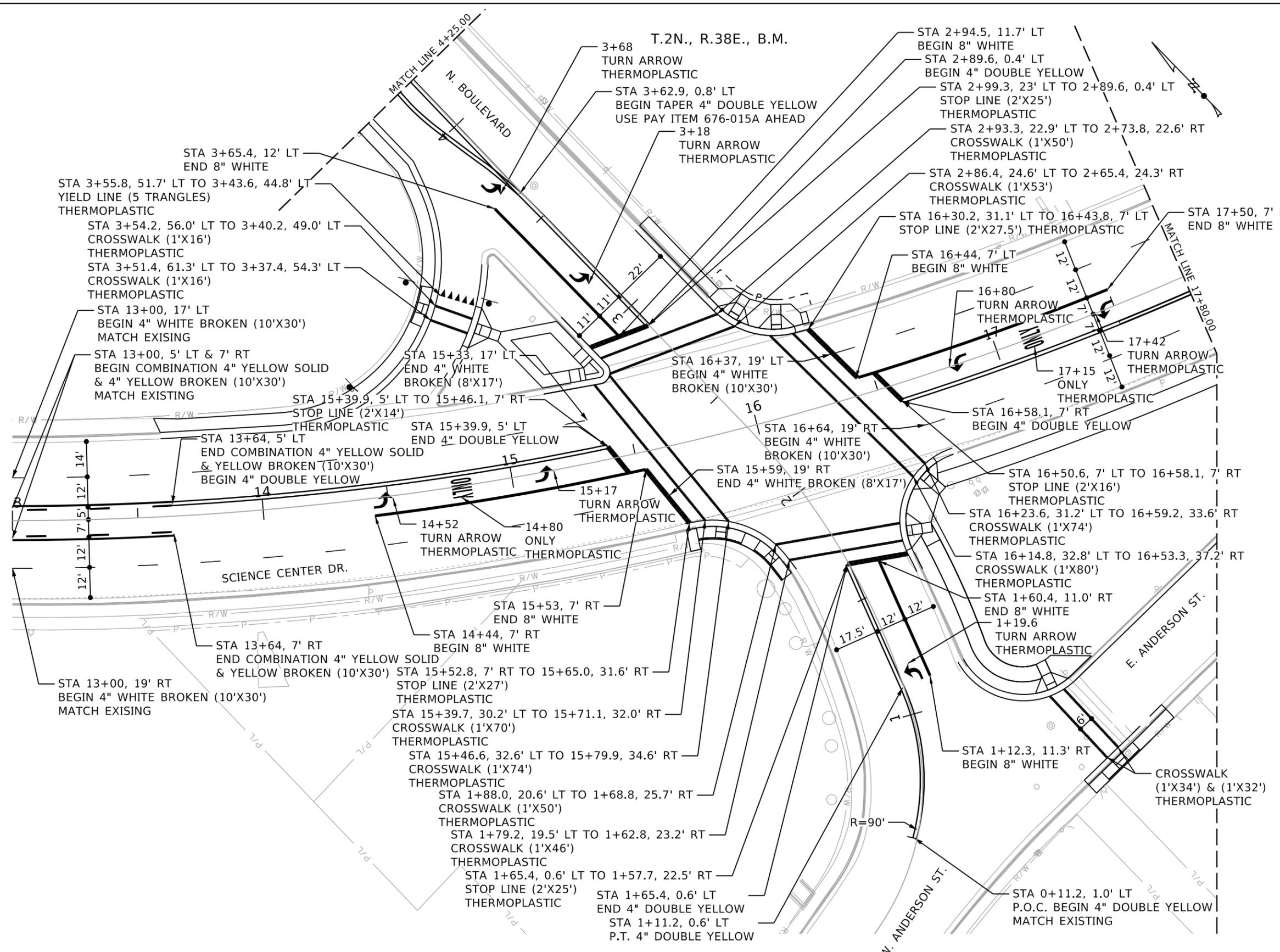
PROJECT NO.	A022(008)
-------------	-----------

SIGNING & HORIZONTAL CONTROL

NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS

ENGLISH	
COUNTY	BONNEVILLE
KEY NUMBER	22008
SHEET 43 OF 61	





NOTES:

1. PAY FOR PAVEMENT MARKINGS INCLUDING ALL LINEAR LINES, TURN ARROWS, RAILROAD CROSSINGS, STOP LINES, CROSSWALKS, ETC., AT THE FOLLOWING LOCATIONS USING PAY ITEM 676-015A, RECORD AND REESTABLISH PAVEMENT MARKINGS.

SCIENCE CENTER DR. (E. ANDERSON) FROM STA 18+75 TO THE CONSTRUCTION JOINT AT HOLMES AVENUE, UNLESS OTHERWISE NOTED

N. BOULEVARD FROM STA 3+62.9 TO THE RAILROAD TRACKS, UNLESS OTHERWISE NOTED.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	T. WILLIAMS	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED	B. BURKE	
DETAILED	T. WILLILAMS	CADD FILE NAME 22008 traf 001.dgn
DRAWING CHECKED	B. BURKE	DRAWING DATE: June 30, 2025

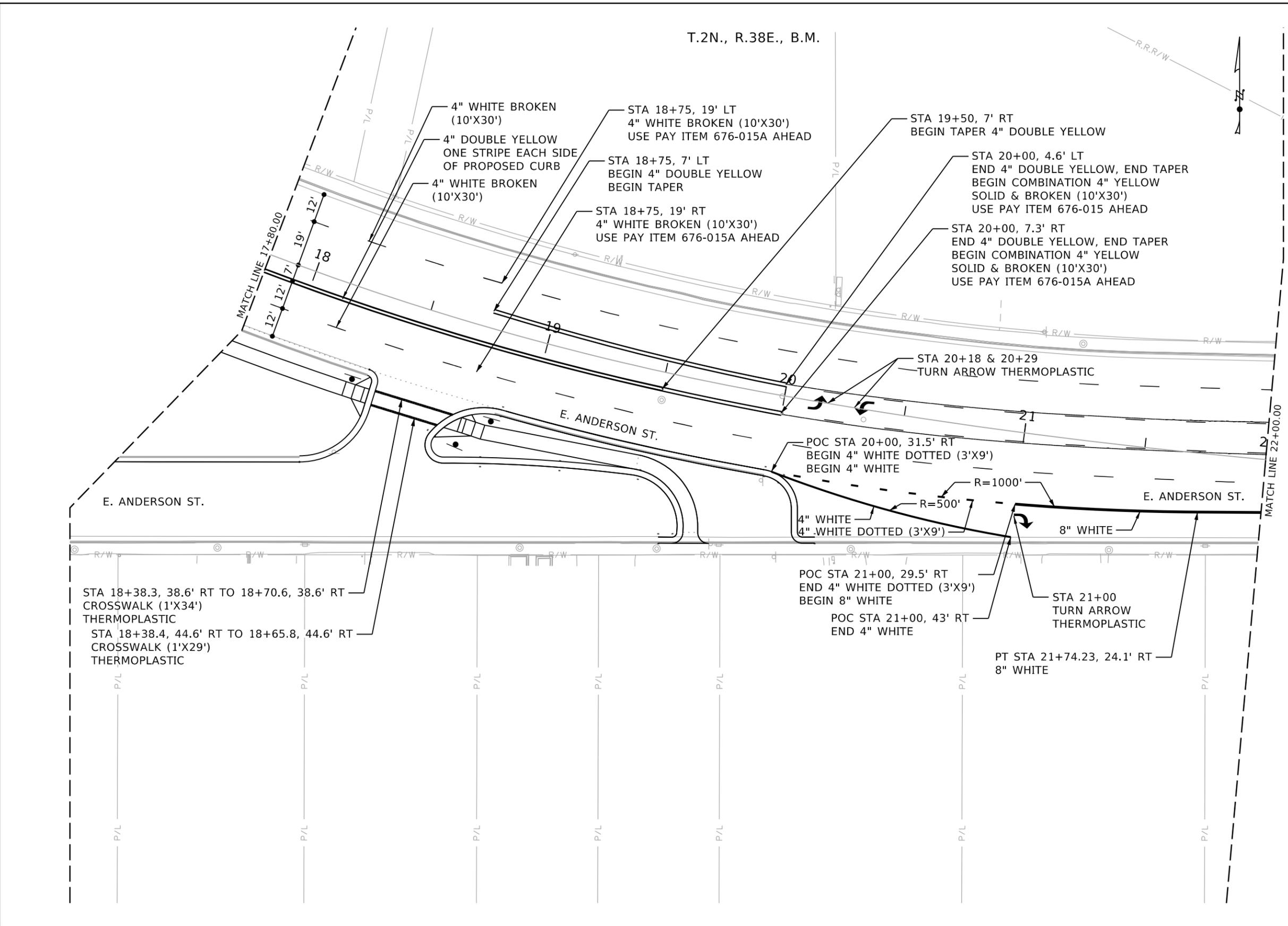
**IDAHO TRANSPORTATION DEPARTMENT**  
 YOUR Safety - YOUR Mobility - YOUR Economic Opportunity  


PROJECT NO.  
A022(008)

PAVEMENT MARKINGS  
NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS

ENGLISH  
COUNTY BONNEVILLE  
KEY NUMBER 22008  
SHEET 44 OF 61





T.2N., R.38E., B.M.

NOTES:  
 1. PAY FOR PAVEMENT MARKINGS INCLUDING ALL LINEAR LINES, TURN ARROWS, RAILROAD CROSSINGS, STOP LINES, CROSSWALKS, ETC., AT THE FOLLOWING LOCATIONS USING PAY ITEM 676-015A, RECORD AND REESTABLISH PAVEMENT MARKINGS.  
 SCIENCE CENTER DR. (E. ANDERSON) FROM STA 18+75 TO THE CONSTRUCTION JOINT AT HOLMES AVENUE, UNLESS OTHERWISE NOTED  
 N. BOULEVARD FROM STA 3+62.9 TO THE RAILROAD TRACKS, UNLESS OTHERWISE NOTED.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	T. WILLIAMS
DESIGN CHECKED	B. BURKE
DETAILED	T. WILLIAMS
DRAWING CHECKED	B. BURKE

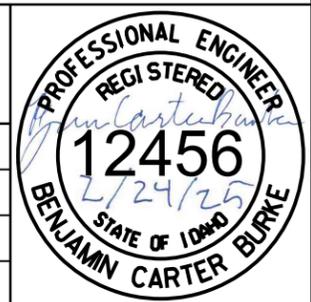
SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME 22008 traf 001.dgn  
 DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**  
 YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

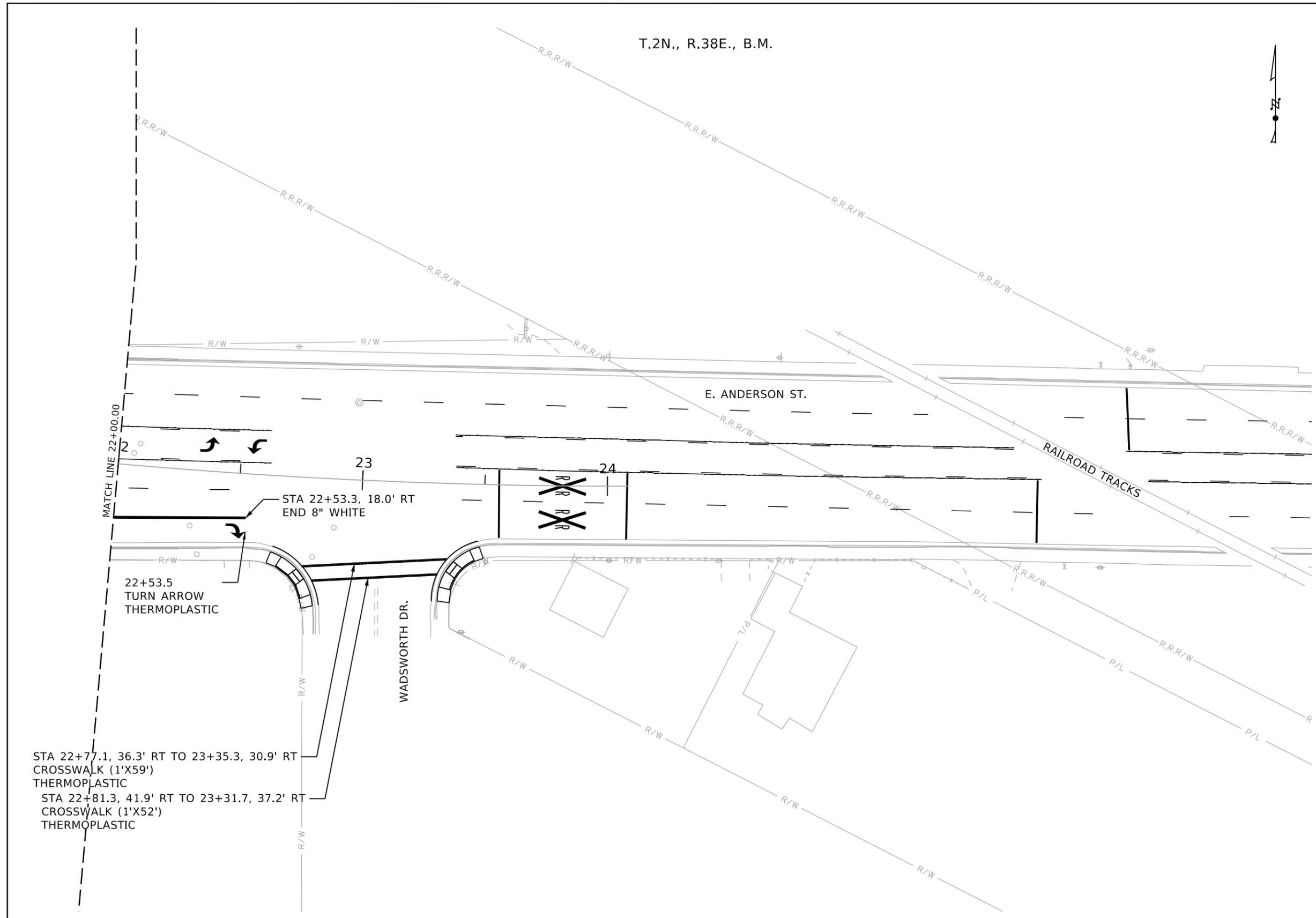
PROJECT NO.  
 A022(008)

PAVEMENT MARKINGS  
 NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS

ENGLISH  
 COUNTY BONNEVILLE  
 KEY NUMBER 22008  
 SHEET 45 OF 61



T.2N., R.38E., B.M.



NOTES:

1. PAY FOR PAVEMENT MARKINGS INCLUDING ALL LINEAR LINES, TURN ARROWS, RAILROAD CROSSINGS, STOP LINES, CROSSWALKS, ETC., AT THE FOLLOWING LOCATIONS USING PAY ITEM 676-015A, RECORD AND REESTABLISH PAVEMENT MARKINGS.  
  
SCIENCE CENTER DR. (E. ANDERSON) FROM STA 18+75 TO THE CONSTRUCTION JOINT AT HOLMES AVENUE, UNLESS OTHERWISE NOTED  
  
N. BOULEVARD FROM STA 3+62.9 TO THE RAILROAD TRACKS, UNLESS OTHERWISE NOTED.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	T. WILLIAMS
DESIGN CHECKED	B. BURKE
DETAILED	T. WILLIAMS
DRAWING CHECKED	B. BURKE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
CADD FILE NAME 22008 traf 001.dgn  
DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**  
YOUR Safety → YOUR Mobility → YOUR Economic Opportunity



**Horrocks.**

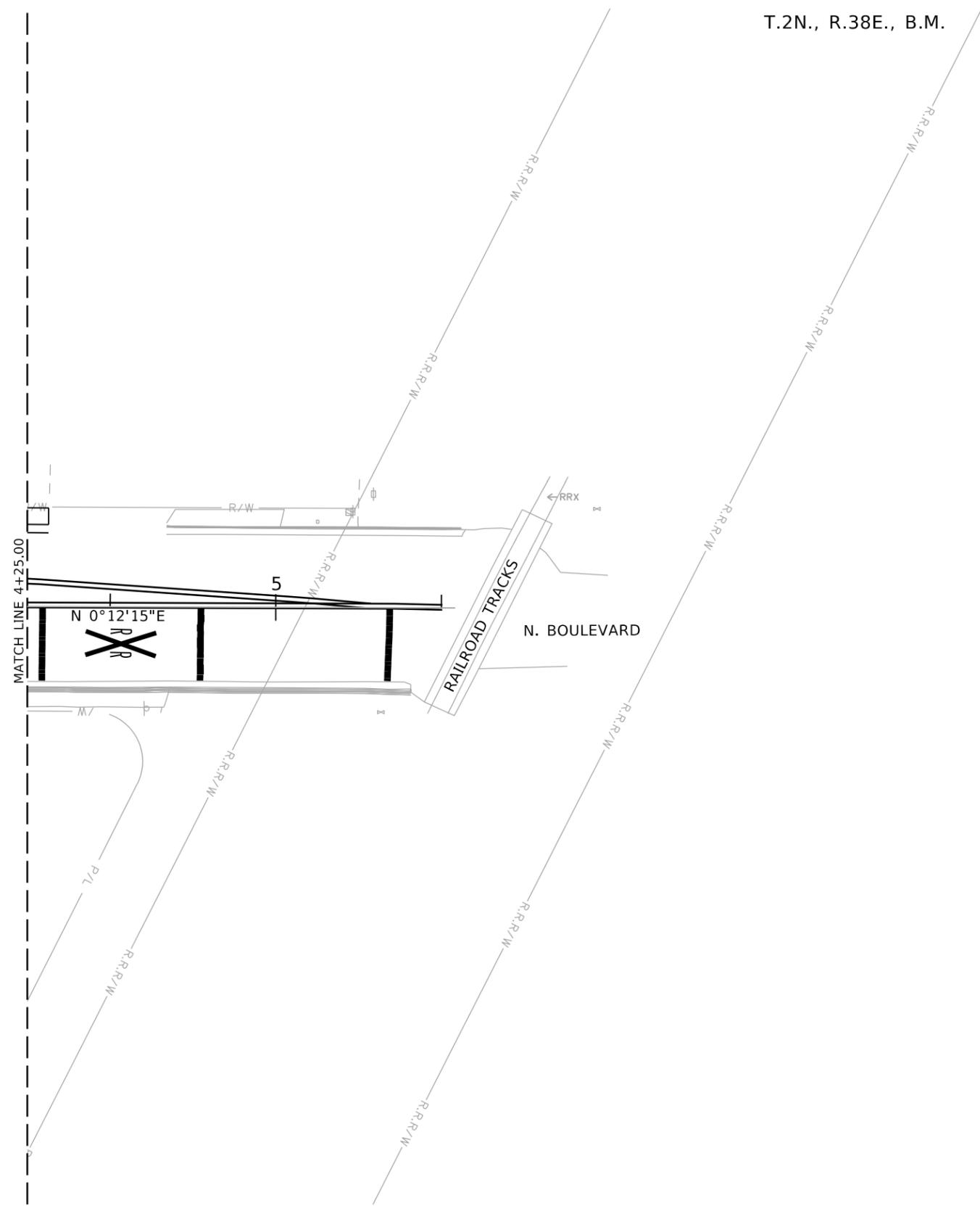
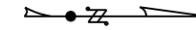
PROJECT NO.  
**A022(008)**

PAVEMENT MARKINGS  
**NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS**

ENGLISH  
COUNTY **BONNEVILLE**  
KEY NUMBER **22008**  
SHEET **46** OF **61**



T.2N., R.38E., B.M.



NOTES:

1. PAY FOR PAVEMENT MARKINGS INCLUDING ALL LINEAR LINES, TURN ARROWS, RAILROAD CROSSINGS, STOP LINES, CROSSWALKS, ETC., AT THE FOLLOWING LOCATIONS USING PAY ITEM 676-015A, RECORD AND REESTABLISH PAVEMENT MARKINGS.

SCIENCE CENTER DR. (E. ANDERSON) FROM STA 18+75 TO THE CONSTRUCTION JOINT AT HOLMES AVENUE, UNLESS OTHERWISE NOTED

N. BOULEVARD FROM STA 3+62.9 TO THE RAILROAD TRACKS, UNLESS OTHERWISE NOTED.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	T. WILLIAMS	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED	B. BURKE	
DETAILED	T. WILLIAMS	CADD FILE NAME 22008 traf 001.dgn
DRAWING CHECKED	B. BURKE	DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

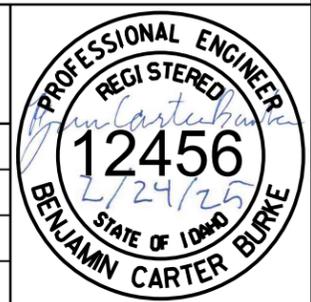


**Horrocks.**

PROJECT NO.	A022(008)
-------------	-----------

PAVEMENT MARKINGS	NHS-7046, SCIENCE CENTER; N BLVD TO HOLMES, IDAHO FALLS
-------------------	---

ENGLISH	COUNTY BONNEVILLE
KEY NUMBER	22008
SHEET	47 OF 61



**GENERAL NOTES:**

1. ONCE THE SIGNAL IS INSTALLED, USE SIGNAL CONTROL BETWEEN 6:00 AM AND 10:00 PM. USE FLAGGER CONTROL WHEN THE SIGNAL IS NON-OPERATIONAL FROM FIRST INITIAL TURN-ON.
2. MOUNT ALL STAND MOUNTED SIGNS 5' ABOVE THE PAVED SURFACE. MOUNT ALL OTHER SIGNS 7' ABOVE THE PAVED SURFACE.
3. FURNISH, INSTALL AND MAINTAIN TWO WARNING FLAGS ON ALL TEMPORARY TRAFFIC CONTROL SIGNS. PAID UNDER MISCELLANEOUS TEMPORARY TRAFFIC CONTROL ITEMS.
4. MEET OR EXCEED THE REQUIREMENTS OF THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AS ADOPTED BY THE STATE FOR ALL TEMPORARY TRAFFIC CONTROL SIGNING.
5. REMOVE OR COVER ALL EXISTING WARNING, AND REGULATORY SIGNS IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SIGNING USING AN APPROVED METHOD WHILE TEMPORARY TRAFFIC CONTROL SIGNS ARE IN EFFECT.
6. THE DISTANCES SHOWN BETWEEN TRAFFIC CONTROL DEVICES ARE MINIMUMS. SOME ADJUSTMENT MAY BE NECESSARY IN THE FIELD DEPENDING ON CONDITIONS ENCOUNTERED.
7. PLACE ALL TEMPORARY TRAFFIC CONTROL SIGNING, TEMPORARY PAVEMENT MARKINGS, DRUMS, AND TUBULAR MARKERS PRIOR TO ANY DIVERSION OF TRAFFIC WITHIN THE WORK ZONE.
8. REMOVE ALL TEMPORARY TRAFFIC CONTROL FROM PROJECT IMMEDIATELY AFTER COMPLETION.
9. RETAIN AND PROTECT ALL EXISTING SIGNS UNLESS OTHERWISE NOTED.
10. MOUNT ANY TEMPORARY TRAFFIC CONTROL SIGNS LEFT UP IN THE SAME LOCATION AND IN USE FOR THREE DAYS OR LONGER ON WOOD OR STEEL POST.

**APPROXIMATE TEMPORARY TRAFFIC CONTROL SIGN QUANTITIES**

SIGN	CLASS	LOGO	SIZE	QTY.	SQ. FT.	TOTAL SQ. FT.
G20-2	B-1	END ROAD WORK	36" X 18"	4	4.5	18
M4-9oR	B-1	PED AND BIKE DETOUR RIGHT	30" X 24"	3	5	15
M4-9oL	B-1	PED AND BIKE DETOUR LEFT	30" X 24"	4	5	20
R9-9	B-1	SIDEWALK CLOSED	24" X 12"	6	2	12
R9-11 (MOD)	B-1	SIDEWALK CLOSED AHEAD	24" X 18"	1	3	3
W3-4	B-1	BE PREPARED TO STOP	48" X 48"	4	16	64
W4-2L(o)	B-1	LEFT LANE ENDS	48" X 48"	2	16	32
W4-2R(o)	B-1	RIGHT LANE ENDS	48" X 48"	2	16	32
W20-1	B-1	ROAD WORK AHEAD	48" X 48"	4	16	64
W20-5L	B-1	LEFT LANE CLOSED AHEAD	48" X 48"	2	16	32
W20-5R	B-1	RIGHT LANE CLOSED AHEAD	48" X 48"	2	16	32
W20-7	B-1	FLAGMAN	48" X 48"	4	16	64
SUB TOTAL						388
25% CONTINGENT						97
TOTAL						485

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED R. TELFORD  
 DESIGN CHECKED B. BURKE  
 DETAILED R. TELFORD  
 DRAWING CHECKED B. BURKE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME 22008 TTCP 001.DGN  
 DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

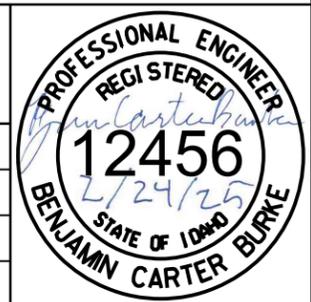


**Horrocks.**

PROJECT NO.  
 A022(008)

GENERAL TRAFFIC CONTROL NOTES  
 NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS

ENGLISH  
 COUNTY BONNEVILLE  
 KEY NUMBER 22008  
 SHEET 48 OF 61



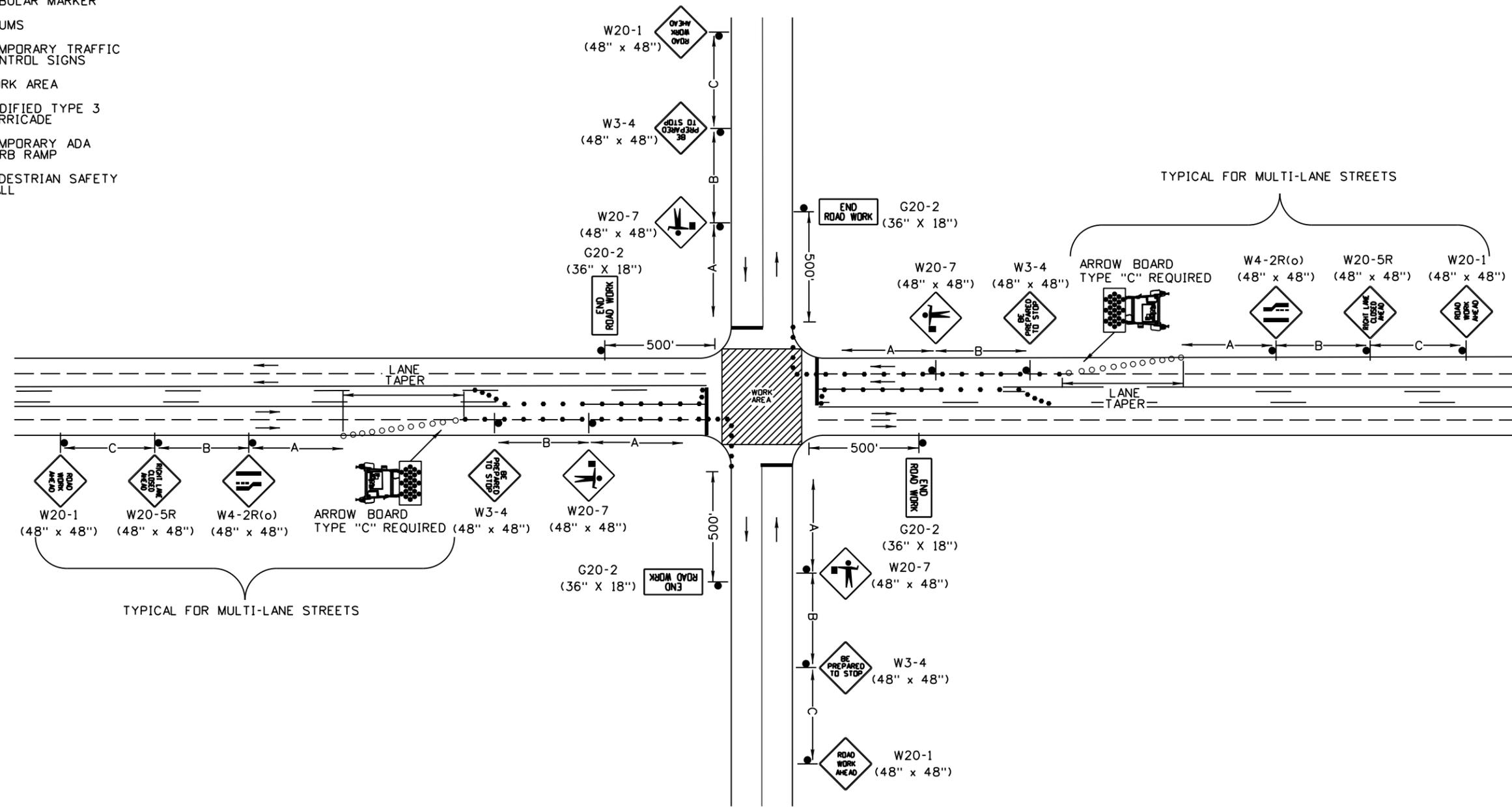
SPEED	DISTANCE BETWEEN SIGNS		
	A	B	C
25 MPH	100 FT	100 FT	100 FT
35 MPH	100 FT	100 FT	100 FT
45 MPH	350 FT	350 FT	350 FT

SPEED	MINIMUM NUMBER OF DEVICES (SPACING)		
	MERGING TAPER (12')	TANGENT	INTERSECTION
25 MPH	6 (125 ft.)	AS NEEDED (50 ft.)	AS NEEDED (10 ft.)
35 MPH	8 (245 ft.)	AS NEEDED (70 ft.)	AS NEEDED (10 ft.)
45 MPH	13 (540 ft.)	AS NEEDED (90 ft.)	AS NEEDED (10 ft.)

### TYPICAL FLAGGING OPERATION

TYPICAL FOR ALL DIRECTIONS OF TRAFFIC  
(NOT TO SCALE)

- WEIGHTED BASE TUBULAR MARKER
- DRUMS
- ⦿ TEMPORARY TRAFFIC CONTROL SIGNS
- ▨ WORK AREA
- ⊥ MODIFIED TYPE 3 BARRICADE
- ⊠ TEMPORARY ADA CURB RAMP
- ▩ PEDESTRIAN SAFETY WALL



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	R. TELFORD	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED	B. BURKE	
DETAILED	R. TELFORD	CADD FILE NAME 22008 TTCP 002.DGN
DRAWING CHECKED	B. BURKE	DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

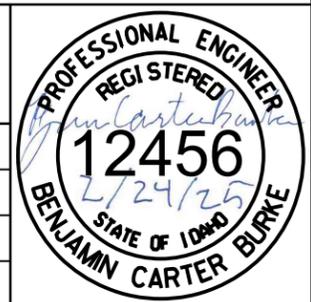
YOUR Safety → YOUR Mobility → YOUR Economic Opportunity

**Horrocks.**

PROJECT NO.  
**A022(008)**

TEMPORARY TRAFFIC CONTROL  
**NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS**

**ENGLISH**  
COUNTY BONNEVILLE  
KEY NUMBER 22008  
SHEET 49 OF 61



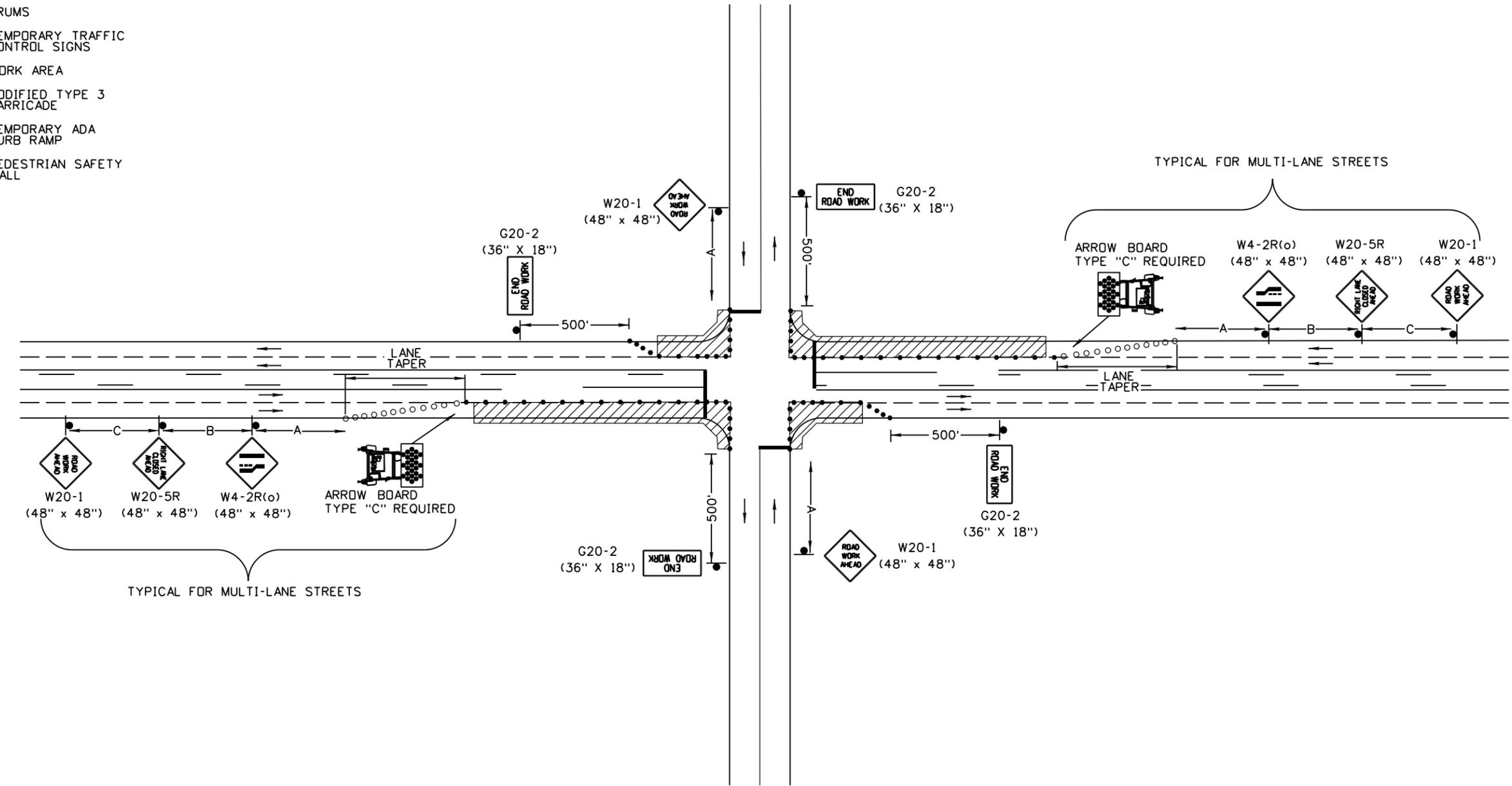
SPEED	DISTANCE BETWEEN SIGNS		
	A	B	C
25 MPH	100 FT	100 FT	100 FT
35 MPH	100 FT	100 FT	100 FT
45 MPH	350 FT	350 FT	350 FT

SPEED	MINIMUM NUMBER OF DEVICES (SPACING)		
	MERGING TAPER (12')	TANGENT	INTERSECTION
25 MPH	6 (125 ft.)	AS NEEDED (50 ft.)	AS NEEDED (10 ft.)
35 MPH	8 (245 ft.)	AS NEEDED (70 ft.)	AS NEEDED (10 ft.)
45 MPH	13 (540 ft.)	AS NEEDED (90 ft.)	AS NEEDED (10 ft.)

### TYPICAL OUTSIDE LANE CLOSURE OPERATION

TYPICAL FOR ALL DIRECTIONS OF TRAFFIC (NOT TO SCALE)

- WEIGHTED BASE TUBULAR MARKER
- DRUMS
- TEMPORARY TRAFFIC CONTROL SIGNS
- ▨ WORK AREA
- MODIFIED TYPE 3 BARRICADE
- ⊗ TEMPORARY ADA CURB RAMP
- ▨ PEDESTRIAN SAFETY WALL



TYPICAL FOR MULTI-LANE STREETS

TYPICAL FOR MULTI-LANE STREETS

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	R. TELFORD	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED	B. BURKE	
DETAILED	R. TELFORD	CADD FILE NAME 22008 TTCP_003.DGN
DRAWING CHECKED	B. BURKE	DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety → YOUR Mobility → YOUR Economic Opportunity

**Horrocks.**

PROJECT NO.	A022(008)
-------------	-----------

TEMPORARY TRAFFIC CONTROL

NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS

ENGLISH
COUNTY BONNEVILLE
KEY NUMBER 22008
SHEET 50 OF 61



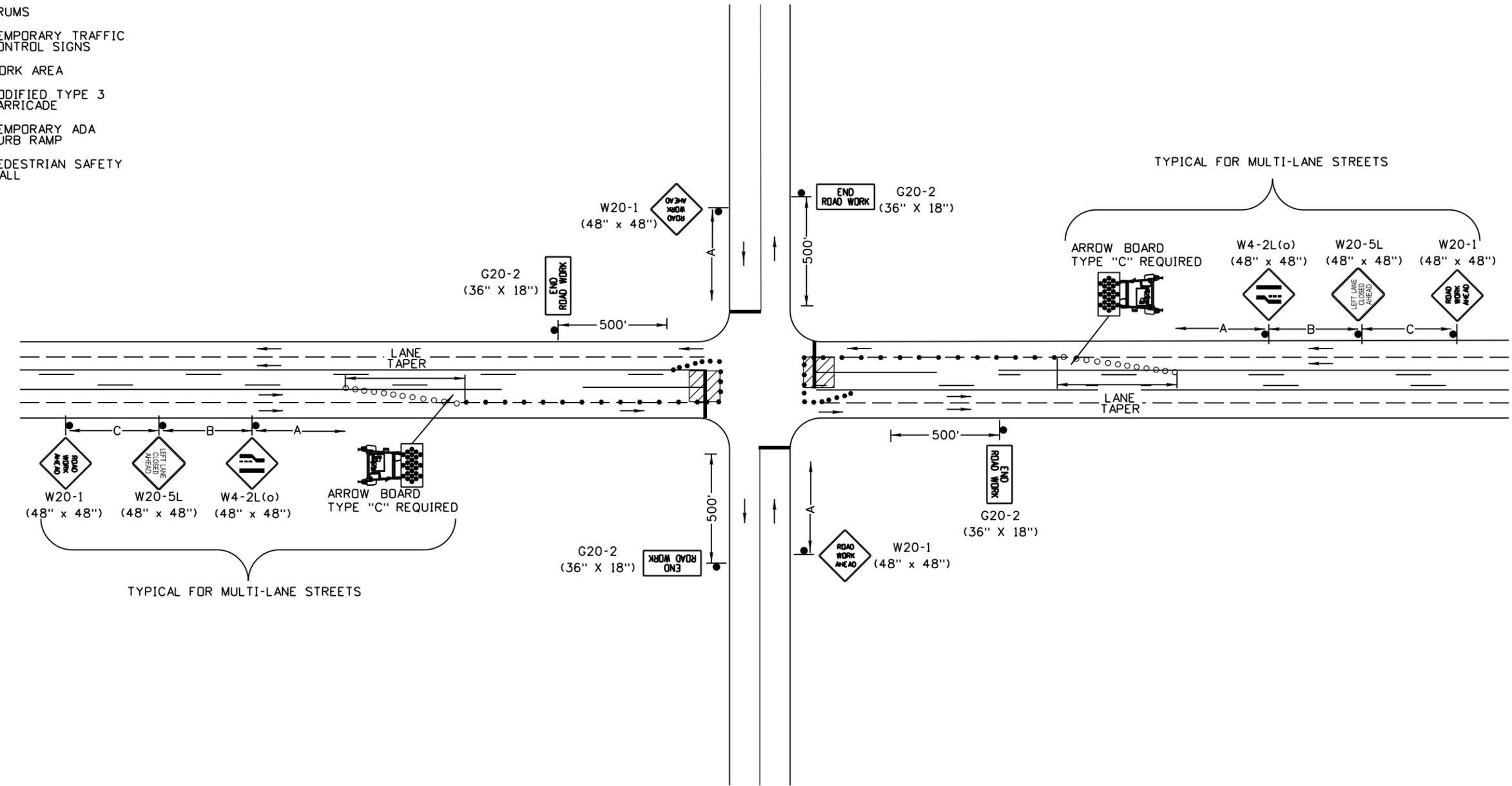
SPEED	DISTANCE BETWEEN SIGNS		
	A	B	C
25 MPH	100 FT	100 FT	100 FT
35 MPH	100 FT	100 FT	100 FT
45 MPH	350 FT	350 FT	350 FT

SPEED	MINIMUM NUMBER OF DEVICES (SPACING)		
	MERGING TAPER (12')	TANGENT	INTERSECTION
25 MPH	6 (125 ft.)	AS NEEDED (50 ft.)	AS NEEDED (10 ft.)
35 MPH	8 (245 ft.)	AS NEEDED (70 ft.)	AS NEEDED (10 ft.)
45 MPH	13 (540 ft.)	AS NEEDED (90 ft.)	AS NEEDED (10 ft.)

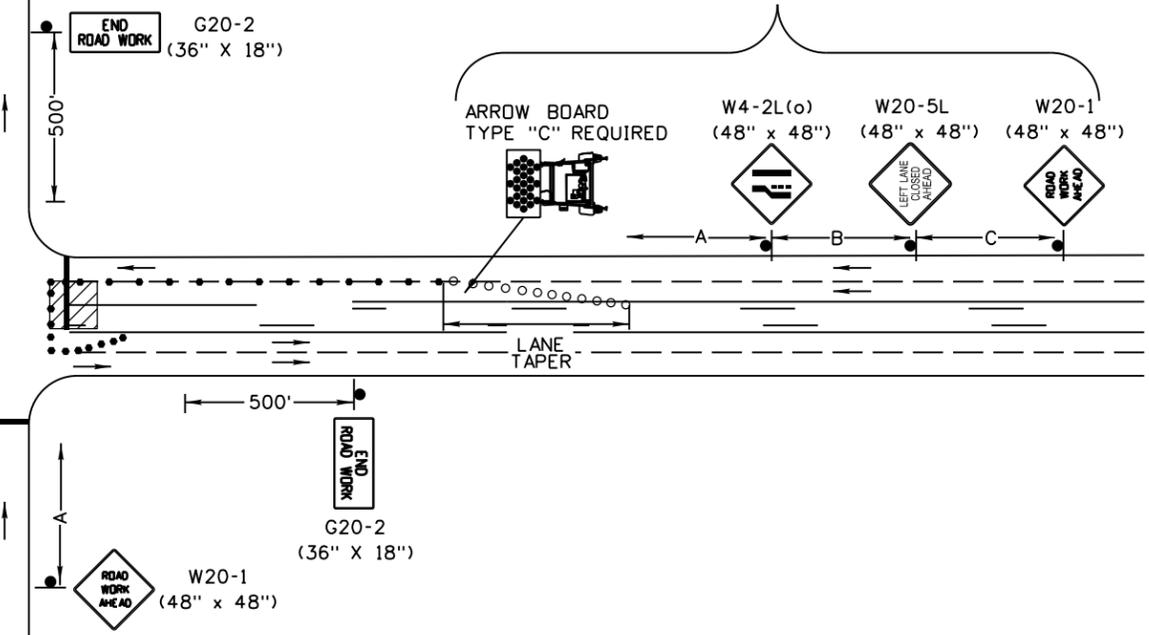
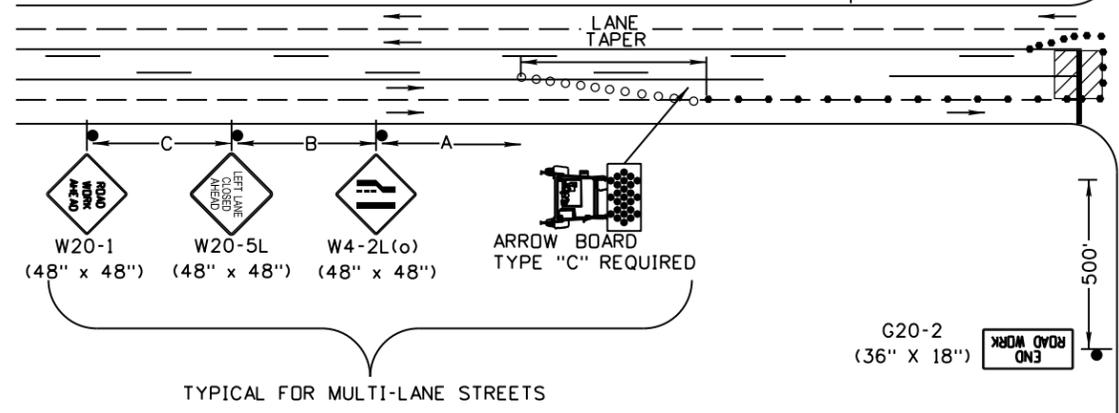
### TYPICAL INSIDE LANE CLOSURE OPERATION

TYPICAL FOR ALL DIRECTIONS OF TRAFFIC (NOT TO SCALE)

- WEIGHTED BASE TUBULAR MARKER
- DRUMS
- ⦿ TEMPORARY TRAFFIC CONTROL SIGNS
- ▨ WORK AREA
- ⊥ MODIFIED TYPE 3 BARRICADE
- ⊠ TEMPORARY ADA CURB RAMP
- ▩ PEDESTRIAN SAFETY WALL



### TYPICAL FOR MULTI-LANE STREETS



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	R. TELFORD
DESIGN CHECKED	B. BURKE
DETAILED	R. TELFORD
DRAWING CHECKED	B. BURKE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME 22008 TTCP\_004.DGN  
 DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**  
 YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

PROJECT NO.  
 A022(008)

TEMPORARY TRAFFIC CONTROL  
 NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS

ENGLISH  
 COUNTY BONNEVILLE  
 KEY NUMBER 22008  
 SHEET 51 OF 61



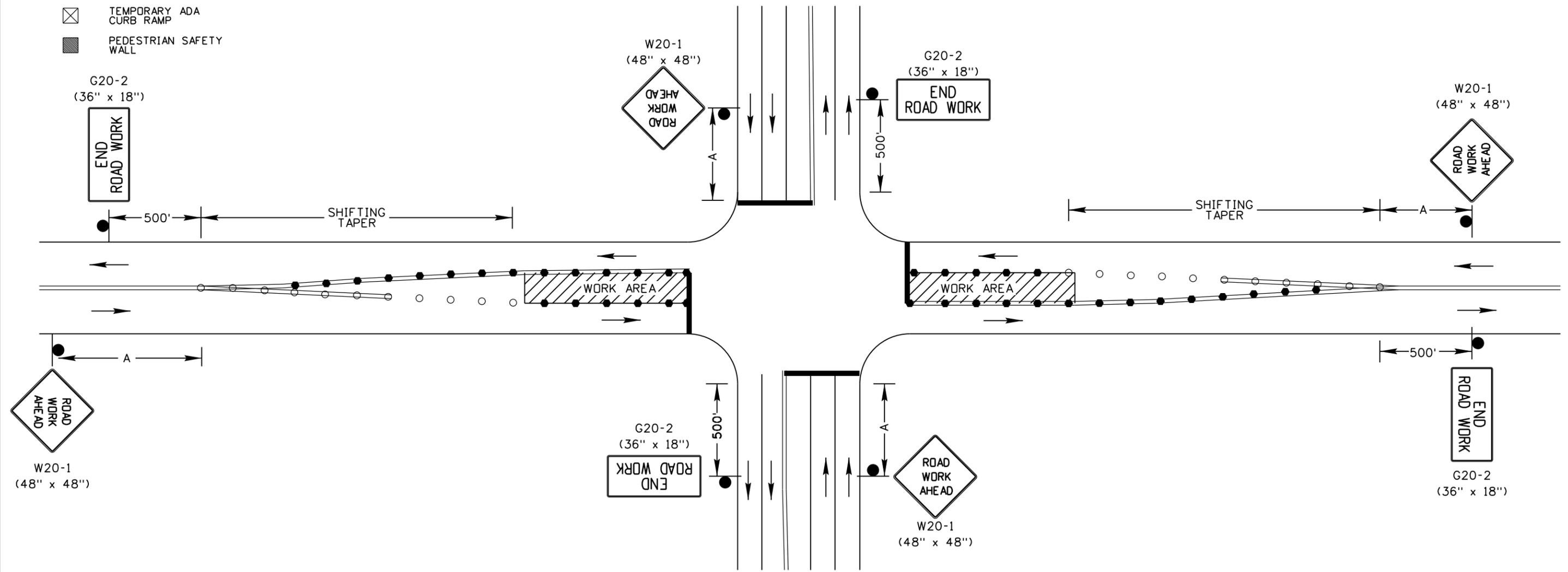
SPEED	DISTANCE BETWEEN SIGNS		
	A	B	C
25 MPH	100 FT	100 FT	100 FT
35 MPH	100 FT	100 FT	100 FT
45 MPH	350 FT	350 FT	350 FT

SPEED	MINIMUM NUMBER OF DEVICES (SPACING)		
	MERGING TAPER (12')	TANGENT	INTERSECTION
25 MPH	6 (125 ft.)	AS NEEDED (50 ft.)	AS NEEDED (10 ft.)
35 MPH	8 (245 ft.)	AS NEEDED (70 ft.)	AS NEEDED (10 ft.)
45 MPH	13 (540 ft.)	AS NEEDED (90 ft.)	AS NEEDED (10 ft.)

### TYPICAL LEFT TURN LANE CLOSURE OPERATION

TYPICAL FOR ALL DIRECTIONS OF TRAFFIC (NOT TO SCALE)

- WEIGHTED BASE TUBULAR MARKER
- DRUMS
- ▬ TEMPORARY TRAFFIC CONTROL SIGNS
- ▨ WORK AREA
- ▬ MODIFIED TYPE 3 BARRICADE
- ⊠ TEMPORARY ADA CURB RAMP
- PEDESTRIAN SAFETY WALL



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	R. TELFORD
DESIGN CHECKED	B. BURKE
DETAILED	R. TELFORD
DRAWING CHECKED	B. BURKE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 22008 TTCP\_005.DGN

DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

**Horrocks.**

PROJECT NO. A022(008)

TEMPORARY TRAFFIC CONTROL

NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS

ENGLISH

COUNTY BONNEVILLE

KEY NUMBER 22008

SHEET 52 OF 61



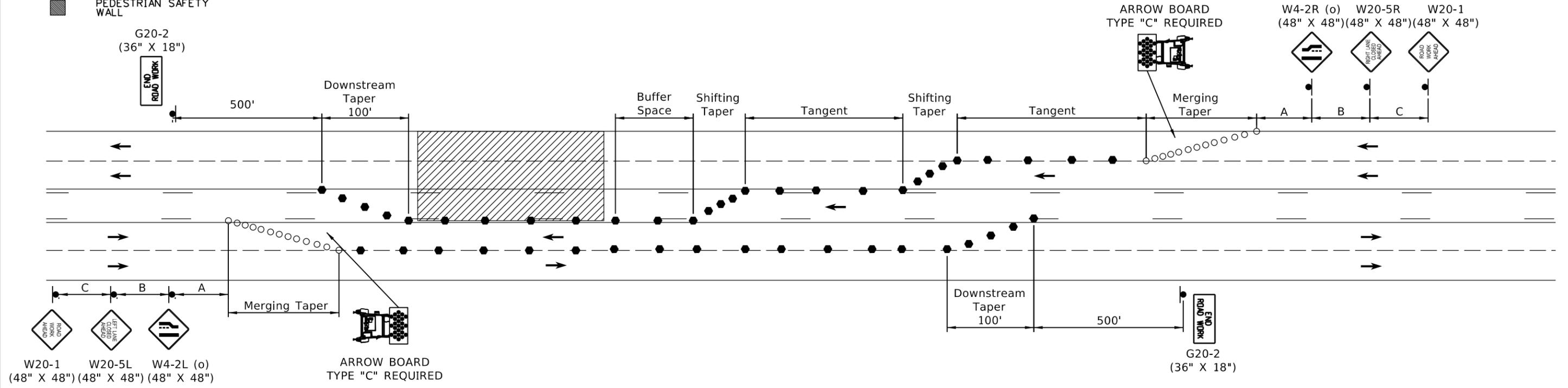
SPEED	DISTANCE BETWEEN SIGNS		
	A	B	C
25 MPH	100 FT	100 FT	100 FT
35 MPH	100 FT	100 FT	100 FT
45 MPH	350 FT	350 FT	350 FT

### TYPICAL 3 LANE CLOSURE OPERATION

TYPICAL FOR ALL DIRECTIONS OF TRAFFIC (NOT TO SCALE)

SPEED	MINIMUM NUMBER OF DEVICES (SPACING)		
	MERGING TAPER (12')	SHIFTING TAPER (12')	TANGENT (12')
25 MPH	6 (125 ft.)	3 (65 ft.)	3 (65 ft.)
35 MPH	8 (245 ft.)	5 (125 ft.)	5 (125 ft.)
45 MPH	13 (540 ft.)	7 (270 ft.)	7 (270 ft.)

- WEIGHTED BASE TUBULAR MARKER
- DRUMS
- TEMPORARY TRAFFIC CONTROL SIGNS
- ▨ WORK AREA
- ┃ MODIFIED TYPE 3 BARRICADE
- ⊠ TEMPORARY ADA CURB RAMP
- PEDESTRIAN SAFETY WALL



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	R. TELFORD
DESIGN CHECKED	B. BURKE
DETAILED	R. TELFORD
DRAWING CHECKED	B. BURKE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 22008 TTCP\_006.DGN

DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

**Horrocks.**

PROJECT NO. A022(008)

TEMPORARY TRAFFIC CONTROL

NHS-7046, SCIENCE CENTER; N BLVD TO HOLMES, IDAHO FALLS

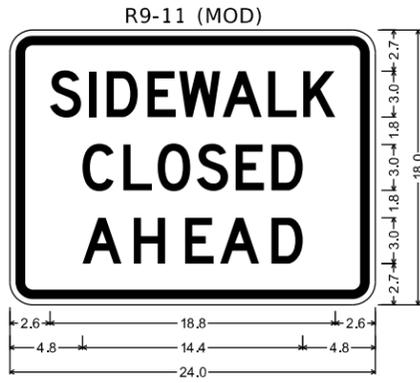
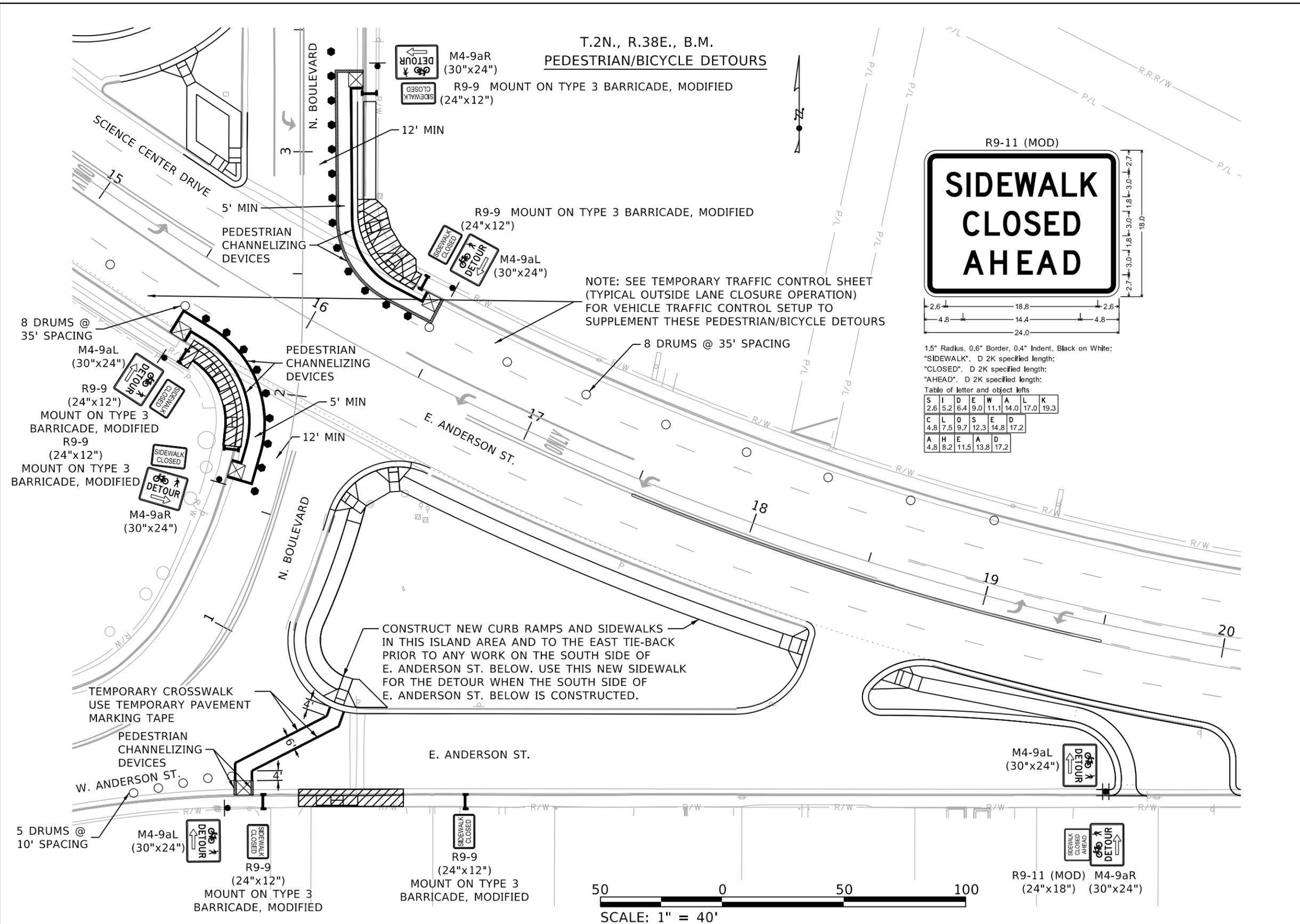
ENGLISH

COUNTY BONNEVILLE

KEY NUMBER 22008

SHEET 53 OF 61

T.2N., R.38E., B.M.  
PEDESTRIAN/BICYCLE DETOURS



1.5" Radius, 0.6" Border, 0.4" Indent, Black on White;  
 "SIDEWALK", D 2K specified length;  
 "CLOSED", D 2K specified length;  
 "AHEAD", D 2K specified length;  
 Table of letter and object lefts

S	I	D	E	W	A	L	K
2.6	5.2	6.4	9.0	11.1	14.0	17.0	19.3
C	L	O	S	E	D		
4.8	7.5	9.7	12.3	14.8	17.2		
A	H	E	A	D			
4.8	8.2	11.5	13.8	17.2			

NOTE: SEE TEMPORARY TRAFFIC CONTROL SHEET (TYPICAL OUTSIDE LANE CLOSURE OPERATION) FOR VEHICLE TRAFFIC CONTROL SETUP TO SUPPLEMENT THESE PEDESTRIAN/BICYCLE DETOURS

CONSTRUCT NEW CURB RAMPS AND SIDEWALKS IN THIS ISLAND AREA AND TO THE EAST TIE-BACK PRIOR TO ANY WORK ON THE SOUTH SIDE OF E. ANDERSON ST. BELOW. USE THIS NEW SIDEWALK FOR THE DETOUR WHEN THE SOUTH SIDE OF E. ANDERSON ST. BELOW IS CONSTRUCTED.



- WEIGHTED BASE TUBULAR MARKER
- DRUMS
- ⊥ TEMPORARY TRAFFIC CONTROL SIGNS
- ▨ WORK AREA
- ⊥ TYPE 3 BARRICADE, MODIFIED
- ⊗ TEMPORARY CURB RAMP
- PEDESTRIAN CHANNELIZING DEVICE

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	T. WILLIAMS	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED	B. BURKE	
DETAILED	T. WILLIAMS	CADD FILE NAME 22008 TTCP 007.dgn
DRAWING CHECKED	B. BURKE	DRAWING DATE: June 30, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

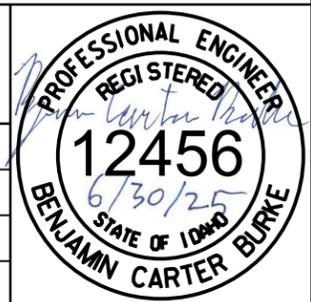
YOUR Safety-YOUR Mobility-YOUR Economic Opportunity

**Horrocks.**

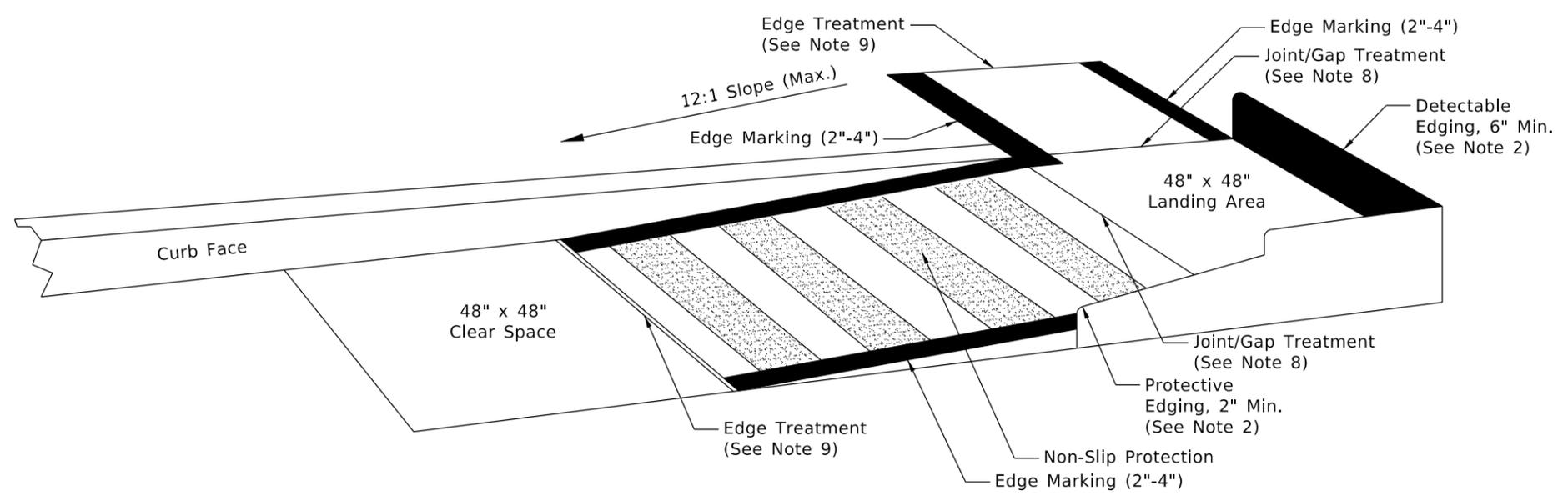
PROJECT NO.	A022(008)
-------------	-----------

TEMPORARY TRAFFIC CONTROL  
 NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS

ENGLISH	12456
COUNTY	BONNEVILLE
KEY NUMBER	22008
SHEET	54 OF 61



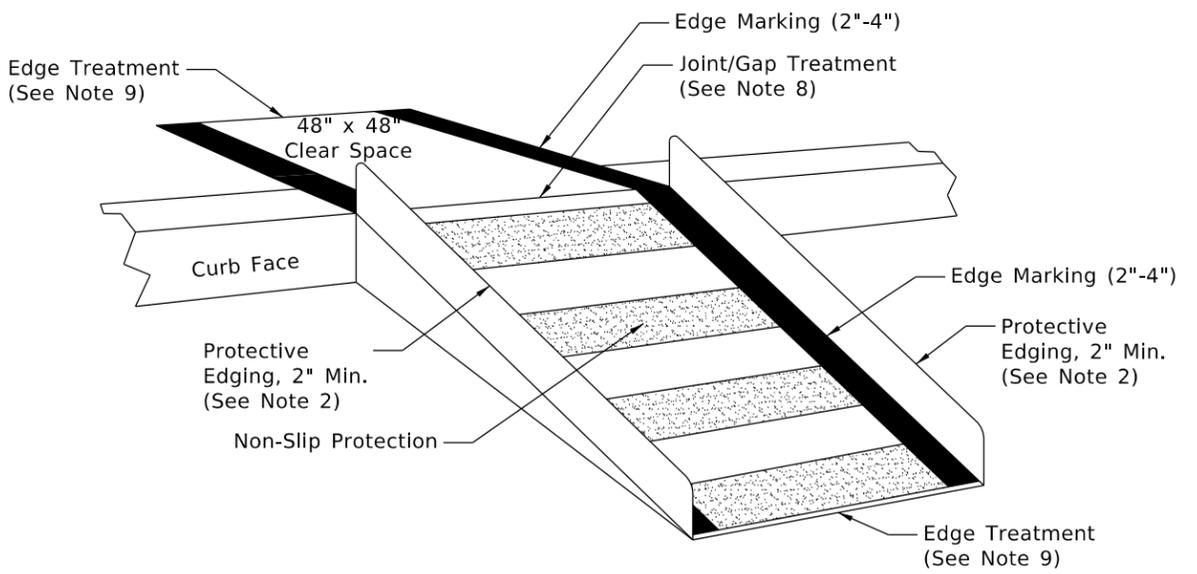
### TEMPORARY CURB RAMP (EXAMPLES)



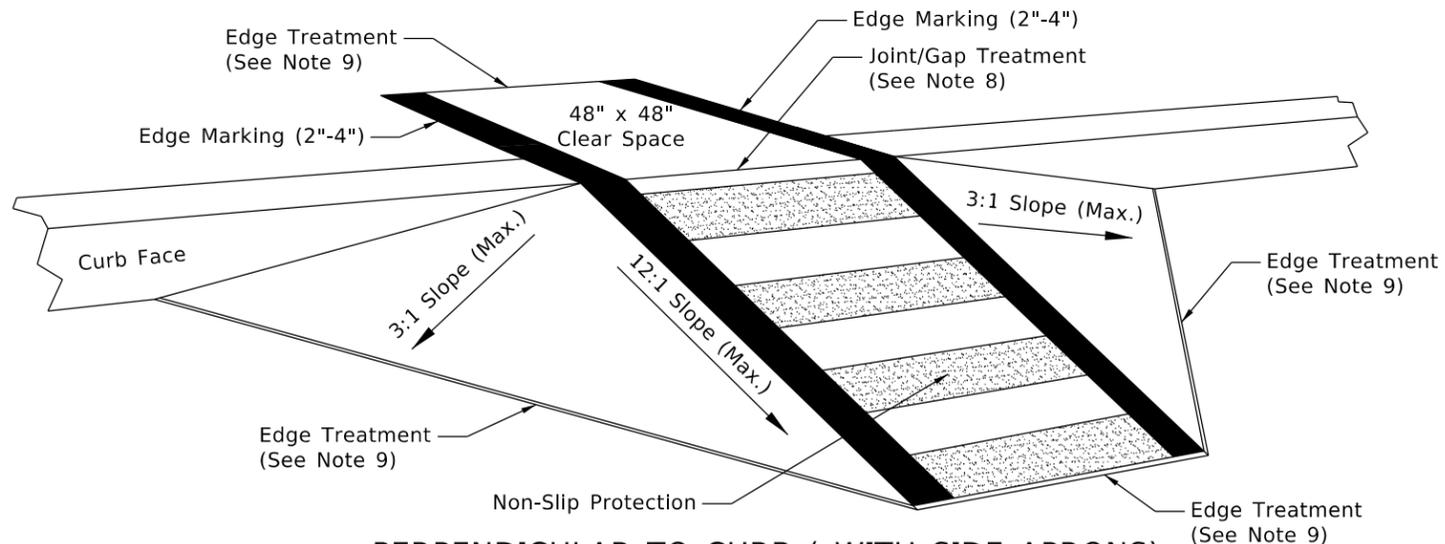
PARALLEL TO CURB

Notes:

1. Ramps shall be 48" minimum with a stable, non-slip surface.
2. Protective edging with a 2" minimum height shall be installed when the ramp or landing platform has a vertical drop of 6" or greater.
3. Detectable edging with a 6" minimum height and contrasting color shall be installed on all ramp landings where the walkway change direction.
4. Ramps and turning spaces shall have a 2% maximum cross slope.
5. Clear space of 48" x 48" minimum shall be provided above and below the ramp.
6. The ramp walkway edge shall be marked with a contrasting color 2" to 4" wide.
7. Water flow in the gutter (where applicable) shall not be restricted.
8. Lateral joints or gaps between surfaces shall be less than 0.5" wide.
9. Changes between surface heights shall not exceed 0.5". Lateral edges shall be vertical up to 0.25" high and beveled at 1:2 between 0.25" and 0.5" high.



PERPENDICULAR TO CURB ( WITH PROTECTIVE EDGES)



PERPENDICULAR TO CURB ( WITH SIDE APRONS)

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	T. WILLIAMS	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED	B. BURKE	
DETAILED	T. WILLIAMS	CADD FILE NAME 22008 TTCP 008.dgn
DRAWING CHECKED	B. BURKE	DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

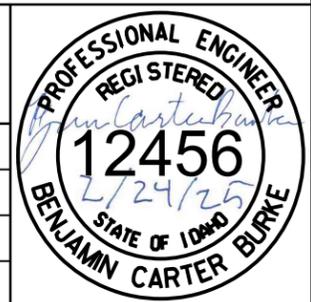
YOUR Safety → YOUR Mobility → YOUR Economic Opportunity

**Horrocks.**

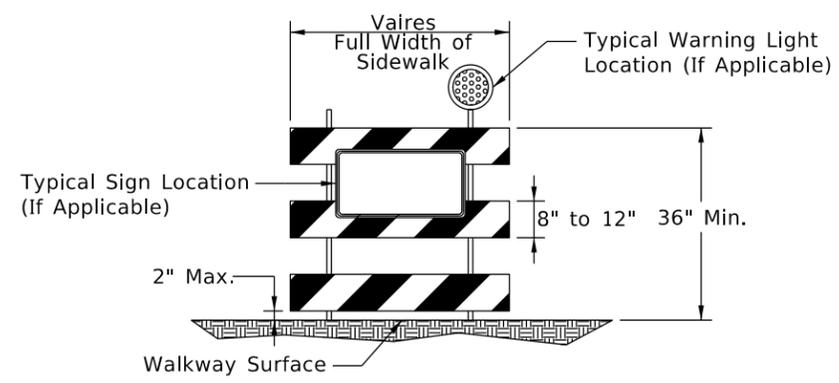
PROJECT NO.	A022(008)
-------------	-----------

TEMPORARY CURB RAMP DETAIL	NHS-7046, SCIENCE CENTER; N BLVD TO HOLMES, IDAHO FALLS
----------------------------	---

ENGLISH
COUNTY BONNEVILLE
KEY NUMBER 22008
SHEET 55 OF 61



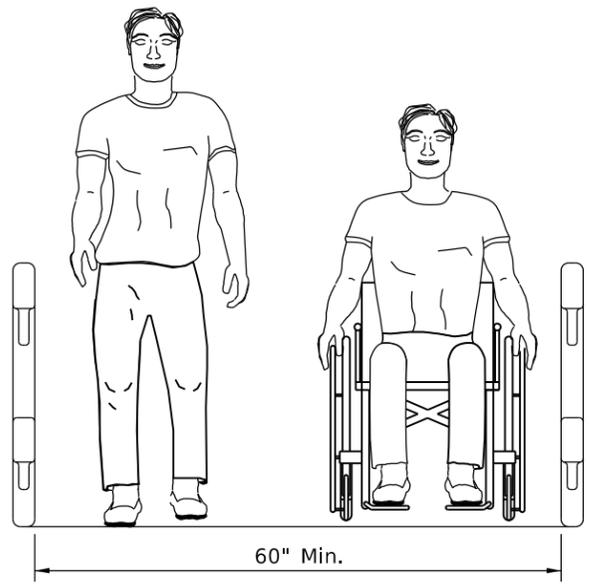
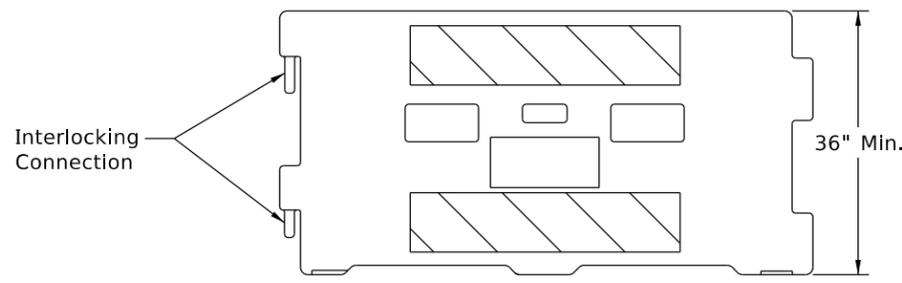
### TYPE 3 BARRICADE, MODIFIED



Notes:

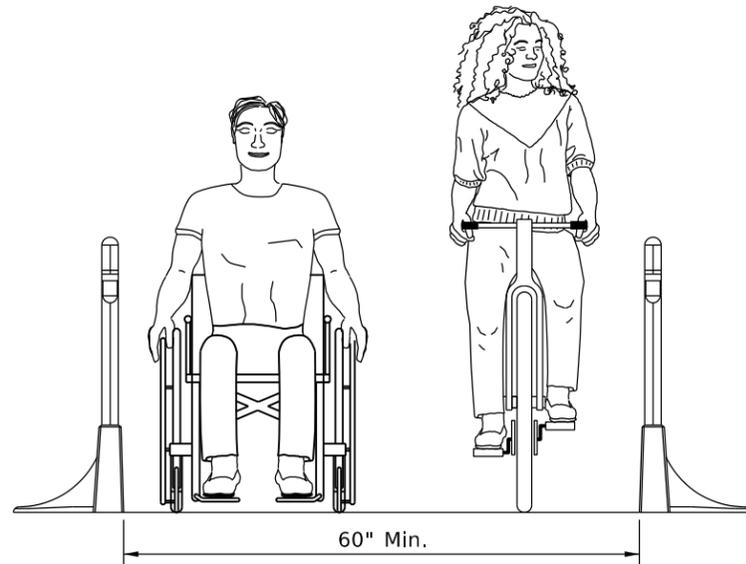
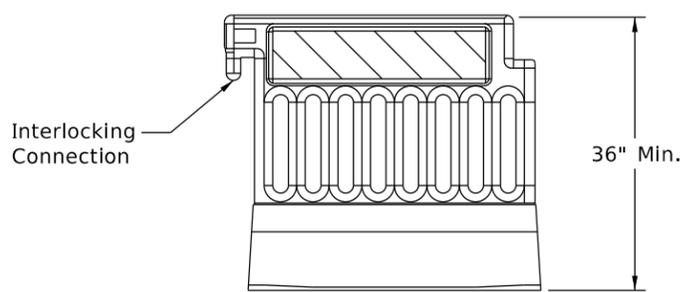
1. Locate any ballast required, behind the barricade. Do not extend any support on the front of the safety wall into the 60" minimum walkway clear space.
2. Provide barricades that are free of sharp or rough edges. Round all fasteners (bolts) to prevent harm to hand, arms, or clothing.
3. Extend barricades across the full width of the sidewalk where barricades are used to close a sidewalk.
4. Provide barricades that meet MASH Test Level 3.

### PEDESTRIAN CHANNELIZING DEVICES EXAMPLES



Notes:

1. Locate any ballast required, behind the channelizing devices. Do not extend any support on the front of the channelizing devices into the 60" minimum walkway clear space.
2. Provide channelizing devices that have a continuous detectable edge no more than 2" above the walkway surface, and extends a minimum of 6" above the the walkway surface.
3. Provide channelizing devices that have a color or markings that contrast with the walkway surface.
4. Install channelizing devices so that they do not block or hinder water drainage from the roadway. Any gap between the bottom of the channelizing devices and the walkway surface shall not to be greater than 2".
5. Install the channelizing devices so that the top of the device is: (1) in a vertical plane perpendicular to the walkway; (2) at a continuous height of 36" to 38" above the walkway surface; (3) supported with a minimal interference to a pedestrian's hand or fingers.
6. Provide channelizing device products that interlock and are free of sharp or rough edges to prevent harm to hand, arms, or clothing.
7. Provide channelizing device products that meet MASH Test Level 3.



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	T. WILLIAMS	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED	B. BURKE	
DETAILED	T. WILLIAMS	CADD FILE NAME 22008 TTCP 009.dgn
DRAWING CHECKED	B. BURKE	DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

**Horrocks.**

PROJECT NO.	A022(008)
-------------	-----------

PEDESTRIAN DETOUR DETAILS	NHS-7046, SCIENCE CENTER; N BLVD TO HOLMES, IDAHO FALLS
---------------------------	---

ENGLISH	COUNTY BONNEVILLE
KEY NUMBER	22008
SHEET	56 OF 61



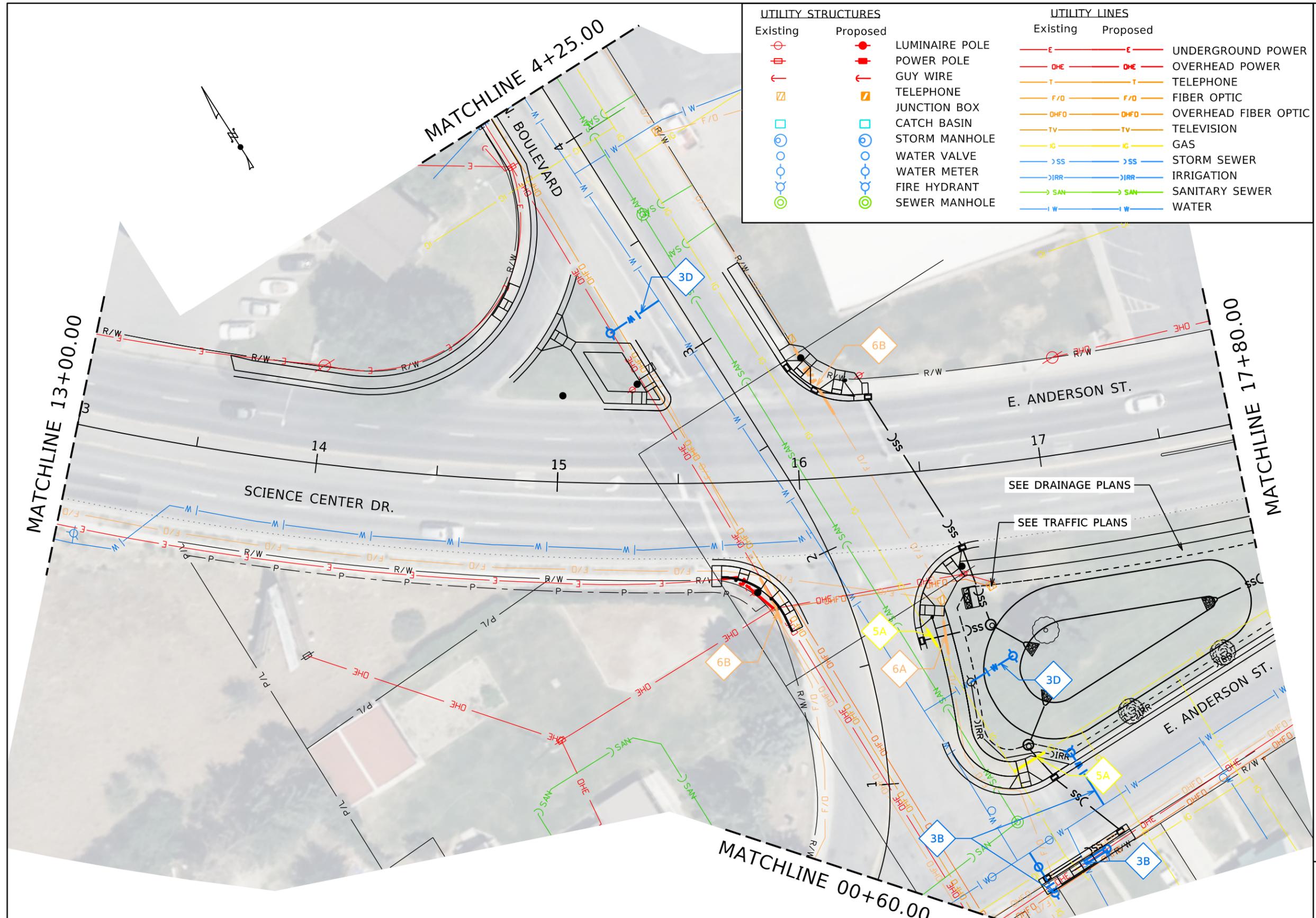
UTILITY STRUCTURES		UTILITY LINES	
Existing	Proposed	Existing	Proposed

- NOTES:**
- CONTRACTOR MUST EXPOSE EXISTING UTILITY CROSSINGS TO VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES 2 WEEKS PRIOR TO CONSTRUCTION. CALL "DIG LINE INC." AT 811 AT LEAST 2 BUSINESS DAYS PRIOR TO CONSTRUCTION.
  - CONTRACTOR MUST COORDINATE WITH ALL UTILITY OWNERS IN THE PROJECT VICINITY FOR SCHEDULING AND PROVIDING ACCESS FOR RELOCATION WORK TO BE PERFORMED BY OTHERS.
  - ALL UTILITIES TO BE RELOCATED MUST BE MOVED TO PERMANENT UTILITY EASEMENT UNLESS OTHERWISE APPROVED BY THE ENGINEER.
  - ALL UTILITIES UNDER THE ROADWAY PRISM ARE TO BE RELOCATED PRIOR TO CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE ENGINEER.

- LEGEND**
- SPARKLIGHT
  - IDAHO FALLS POWER
  - IDAHO FALLS WATER
  - IDAHO FALLS SEWER
  - INTERMOUNTAIN GAS
  - LUMEN
  - IDAHO FALLS FIBER

- A ADJUST DEPTH BY COMPANY AT COMPANY EXPENSE
- B REMOVE AND RELOCATE BY COMPANY AT COMPANY EXPENSE
- C ADJUST DEPTH BY CONTRACTOR AT PROJECT EXPENSE
- D REMOVE BY COMPANY AT COMPANY EXPENSE

RETAIN AND PROTECT ALL OTHER UTILITY MARKINGS THAT ARE NOT SPECIFIED



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED  
B. SCHELLENBERG

DESIGN CHECKED  
K. KAUER

DETAILED  
B. SCHELLENBERG

DRAWING CHECKED  
K. KAUER

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME  
22008 UTIL 001.DGN

DRAWING DATE:  
June 30, 2025

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety-YOUR Mobility-YOUR Economic Opportunity

**Horrocks.**

PROJECT NO.  
A022(008)

UTILITY PLAN SHEET

NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS

**ENGLISH**

COUNTY  
BONNEVILLE

KEY NUMBER  
22008

SHEET 57 OF 61



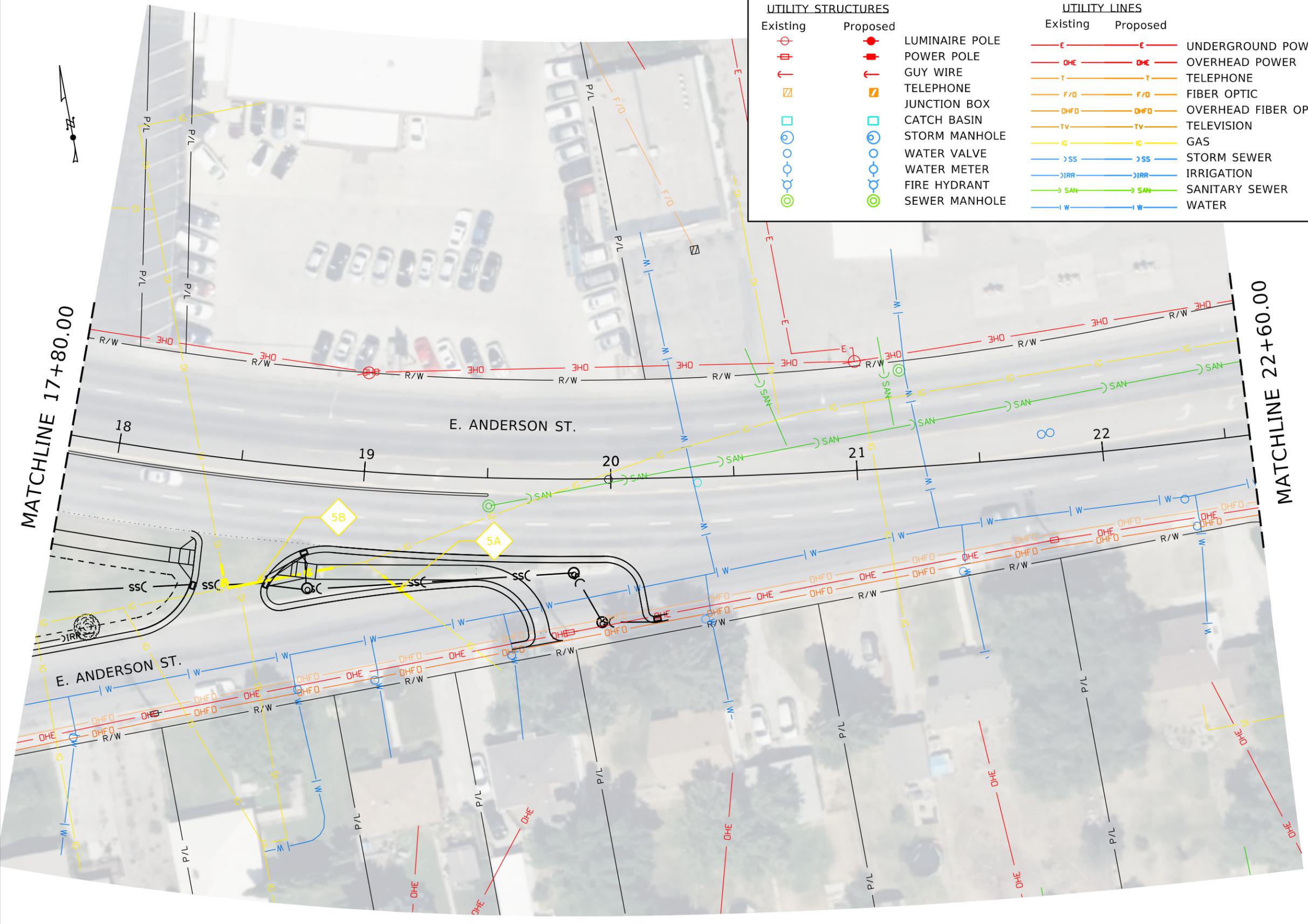
UTILITY STRUCTURES		UTILITY LINES	
Existing	Proposed	Existing	Proposed

- NOTES:
- CONTRACTOR MUST EXPOSE EXISTING UTILITY CROSSINGS TO VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES 2 WEEKS PRIOR TO CONSTRUCTION. CALL "DIG LINE INC." AT 811 AT LEAST 2 BUSINESS DAYS PRIOR TO CONSTRUCTION.
  - CONTRACTOR MUST COORDINATE WITH ALL UTILITY OWNERS IN THE PROJECT VICINITY FOR SCHEDULING AND PROVIDING ACCESS FOR RELOCATION WORK TO BE PERFORMED BY OTHERS.
  - ALL UTILITIES TO BE RELOCATED MUST BE MOVED TO PERMANENT UTILITY EASEMENT UNLESS OTHERWISE APPROVED BY THE ENGINEER.
  - ALL UTILITIES UNDER THE ROADWAY PRISM ARE TO BE RELOCATED PRIOR TO CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE ENGINEER.

- LEGEND
- SPARKLIGHT
  - IDAHO FALLS POWER
  - IDAHO FALLS WATER
  - IDAHO FALLS SEWER
  - INTERMOUNTAIN GAS
  - LUMEN
  - IDAHO FALLS FIBER

- A ADJUST DEPTH BY COMPANY AT COMPANY EXPENSE
- B REMOVE AND RELOCATE BY COMPANY AT COMPANY EXPENSE
- C ADJUST DEPTH BY CONTRACTOR AT PROJECT EXPENSE
- D REMOVE BY COMPANY AT COMPANY EXPENSE

RETAIN AND PROTECT ALL OTHER UTILITY MARKINGS THAT ARE NOT SPECIFIED



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED  
B. SCHELLENBERG  
DESIGN CHECKED  
K. KAUER  
DETAILED  
B. SCHELLENBERG  
DRAWING CHECKED  
K. KAUER

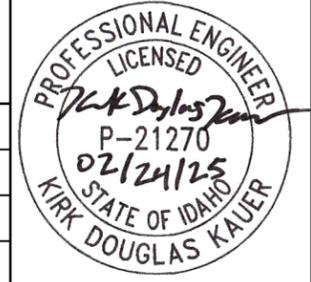
SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
CADD FILE NAME  
22008 UTIL 001.DGN  
DRAWING DATE:  
January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**  
YOUR Safety-YOUR Mobility-YOUR Economic Opportunity  
  
**Horrocks.**

PROJECT NO.  
A022(008)

UTILITY PLAN SHEET  
NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS

ENGLISH  
COUNTY BONNEVILLE  
KEY NUMBER 22008  
SHEET 58 OF 61



UTILITY STRUCTURES		UTILITY LINES	
Existing	Proposed	Existing	Proposed

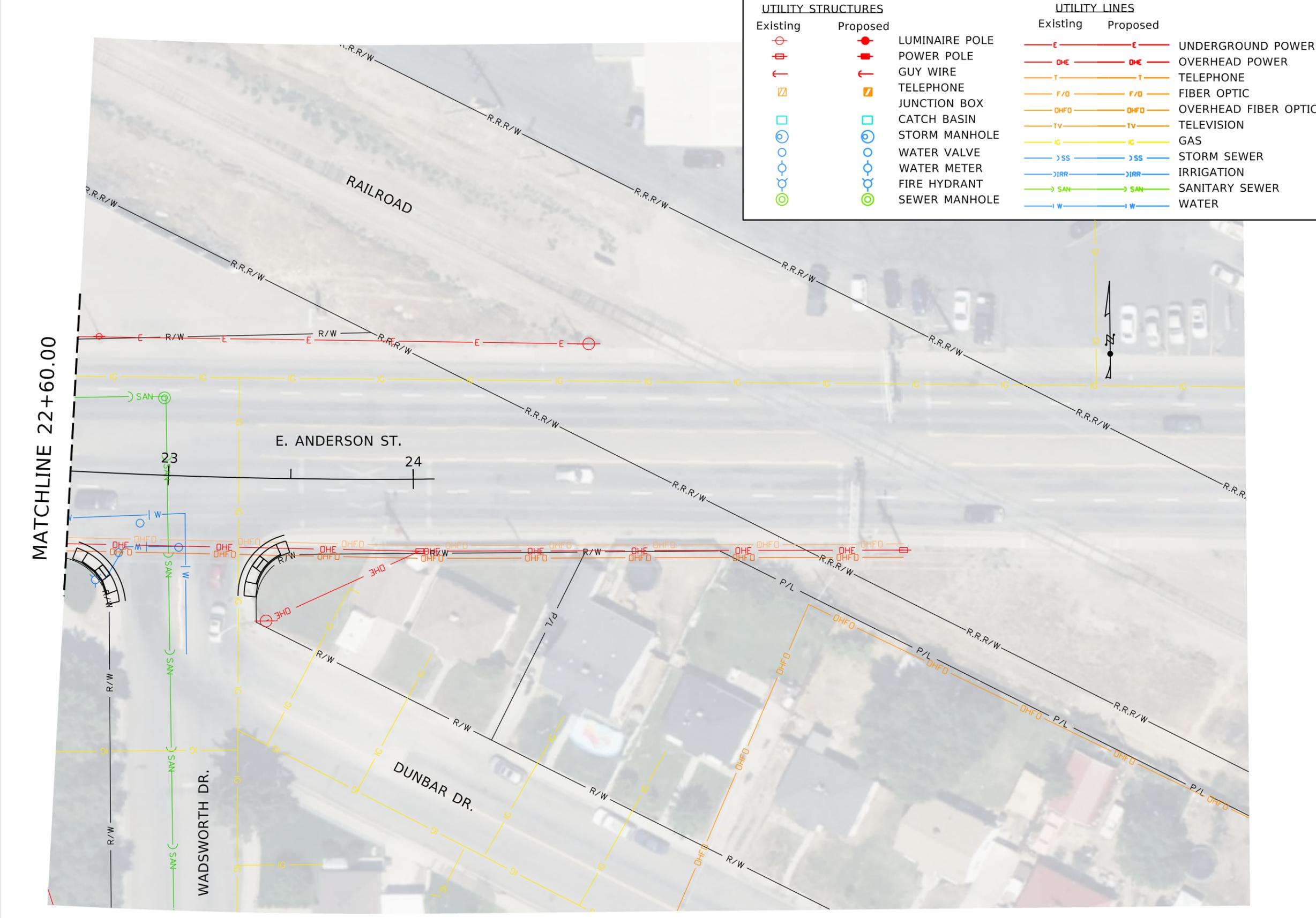
- NOTES:**
- CONTRACTOR MUST EXPOSE EXISTING UTILITY CROSSINGS TO VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES 2 WEEKS PRIOR TO CONSTRUCTION. CALL "DIG LINE INC." AT 811 AT LEAST 2 BUSINESS DAYS PRIOR TO CONSTRUCTION.
  - CONTRACTOR MUST COORDINATE WITH ALL UTILITY OWNERS IN THE PROJECT VICINITY FOR SCHEDULING AND PROVIDING ACCESS FOR RELOCATION WORK TO BE PERFORMED BY OTHERS.
  - ALL UTILITIES TO BE RELOCATED MUST BE MOVED TO PERMANENT UTILITY EASEMENT UNLESS OTHERWISE APPROVED BY THE ENGINEER.
  - ALL UTILITIES UNDER THE ROADWAY PRISM ARE TO BE RELOCATED PRIOR TO CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE ENGINEER.

**LEGEND**

	SPARKLIGHT
	IDAHO FALLS POWER
	IDAHO FALLS WATER
	IDAHO FALLS SEWER
	INTERMOUNTAIN GAS
	LUMEN
	IDAHO FALLS FIBER

- A ADJUST DEPTH BY COMPANY AT COMPANY EXPENSE
- B REMOVE AND RELOCATE BY COMPANY AT COMPANY EXPENSE
- C ADJUST DEPTH BY CONTRACTOR AT PROJECT EXPENSE
- D REMOVE BY COMPANY AT COMPANY EXPENSE

RETAIN AND PROTECT ALL OTHER UTILITY MARKINGS THAT ARE NOT SPECIFIED



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED B. SCHELLENBERG	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED K. KAUER	
DETAILED B. SCHELLENBERG	CADD FILE NAME 22008 UTIL 001.DGN
DRAWING CHECKED K. KAUER	DRAWING DATE: January 22, 2025

**IDAHO TRANSPORTATION DEPARTMENT**  
 YOUR Safety → YOUR Mobility → YOUR Economic Opportunity

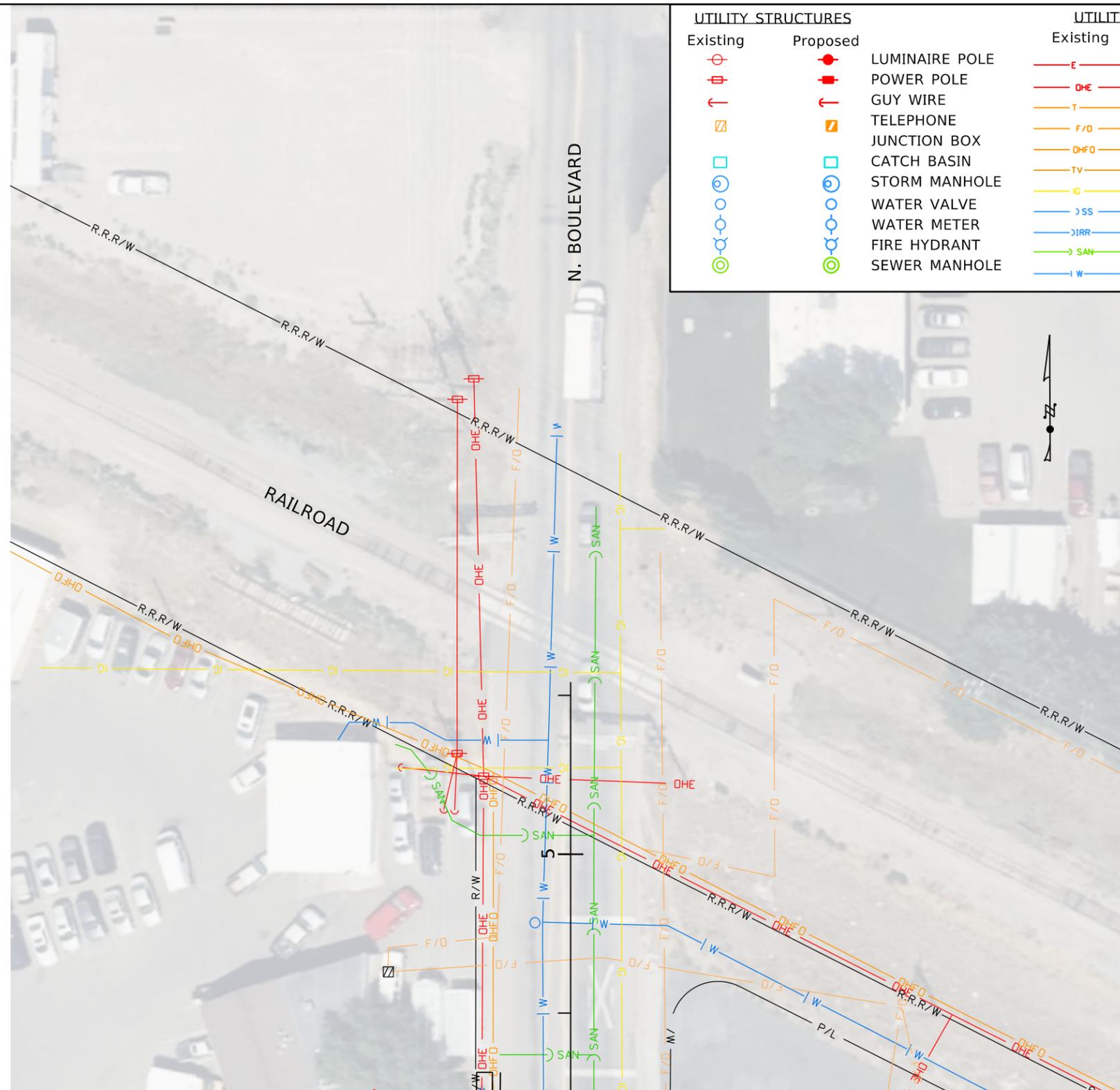
PROJECT NO.  A022(008)
------------------------------

UTILITY PLAN SHEET  
**NHS-7046, SCIENCE CENTER;  
 N BLVD TO HOLMES,  
 IDAHO FALLS**

<b>ENGLISH</b>
COUNTY BONNEVILLE
KEY NUMBER 22008
SHEET 59 OF 61







UTILITY STRUCTURES		UTILITY LINES	
Existing	Proposed	Existing	Proposed

- NOTES:
- CONTRACTOR MUST EXPOSE EXISTING UTILITY CROSSINGS TO VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES 2 WEEKS PRIOR TO CONSTRUCTION. CALL "DIG LINE INC." AT 811 AT LEAST 2 BUSINESS DAYS PRIOR TO CONSTRUCTION.
  - CONTRACTOR MUST COORDINATE WITH ALL UTILITY OWNERS IN THE PROJECT VICINITY FOR SCHEDULING AND PROVIDING ACCESS FOR RELOCATION WORK TO BE PERFORMED BY OTHERS.
  - ALL UTILITIES TO BE RELOCATED MUST BE MOVED TO PERMANENT UTILITY EASEMENT UNLESS OTHERWISE APPROVED BY THE ENGINEER.
  - ALL UTILITIES UNDER THE ROADWAY PRISM ARE TO BE RELOCATED PRIOR TO CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE ENGINEER.

**LEGEND**

	SPARKLIGHT
	IDAHO FALLS POWER
	IDAHO FALLS WATER
	IDAHO FALLS SEWER
	INTERMOUNTAIN GAS
	LUMEN
	IDAHO FALLS FIBER

- A ADJUST DEPTH BY COMPANY AT COMPANY EXPENSE
- B REMOVE AND RELOCATE BY COMPANY AT COMPANY EXPENSE
- C ADJUST DEPTH BY CONTRACTOR AT PROJECT EXPENSE
- D REMOVE BY COMPANY AT COMPANY EXPENSE

RETAIN AND PROTECT ALL OTHER UTILITY MARKINGS THAT ARE NOT SPECIFIED

MATCHLINE 4+25.00

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED B. SCHELLENBERG	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  CADD FILE NAME 22008 UTIL 001.DGN  DRAWING DATE: January 22, 2025
DESIGN CHECKED K. KAUER	
DETAILED B. SCHELLENBERG	
DRAWING CHECKED K. KAUER	

**IDAHO TRANSPORTATION DEPARTMENT**

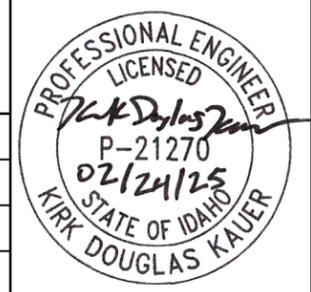
YOUR Safety → YOUR Mobility → YOUR Economic Opportunity

PROJECT NO.  A022(008)
------------------------------

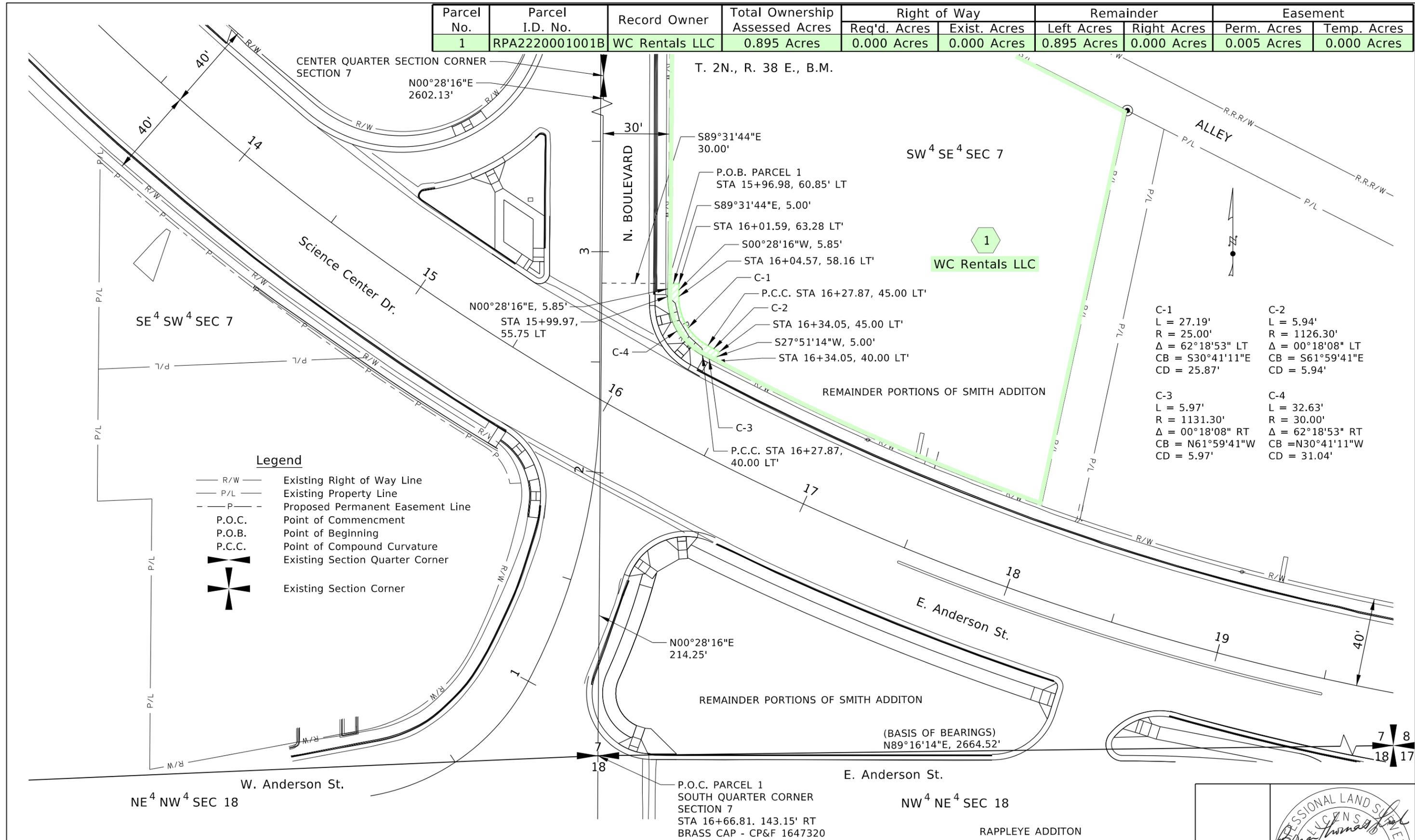
UTILITY PLAN SHEET

NHS-7046, SCIENCE CENTER;  
N BLVD TO HOLMES,  
IDAHO FALLS

ENGLISH	
COUNTY	BONNEVILLE
KEY NUMBER	22008
SHEET	61 OF 61



Parcel No.	Parcel I.D. No.	Record Owner	Total Ownership Assessed Acres	Right of Way		Remainder		Easement	
				Req'd. Acres	Exist. Acres	Left Acres	Right Acres	Perm. Acres	Temp. Acres
1	RPA2220001001B	WC Rentals LLC	0.895 Acres	0.000 Acres	0.000 Acres	0.895 Acres	0.000 Acres	0.005 Acres	0.000 Acres



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	T. WILLIAMS	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED	B. BURKE	
DETAILED	T. WILLIAMS	CADD FILE NAME 22008 ROW 001.DGN
DRAWING CHECKED	B. BURKE	DRAWING DATE: 9-OCT-2024

**IDAHO TRANSPORTATION DEPARTMENT**

YOUR Safety → YOUR Mobility → YOUR Economic Opportunity

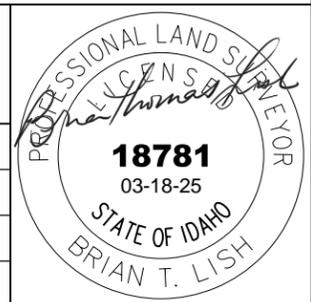
**Horrocks.**

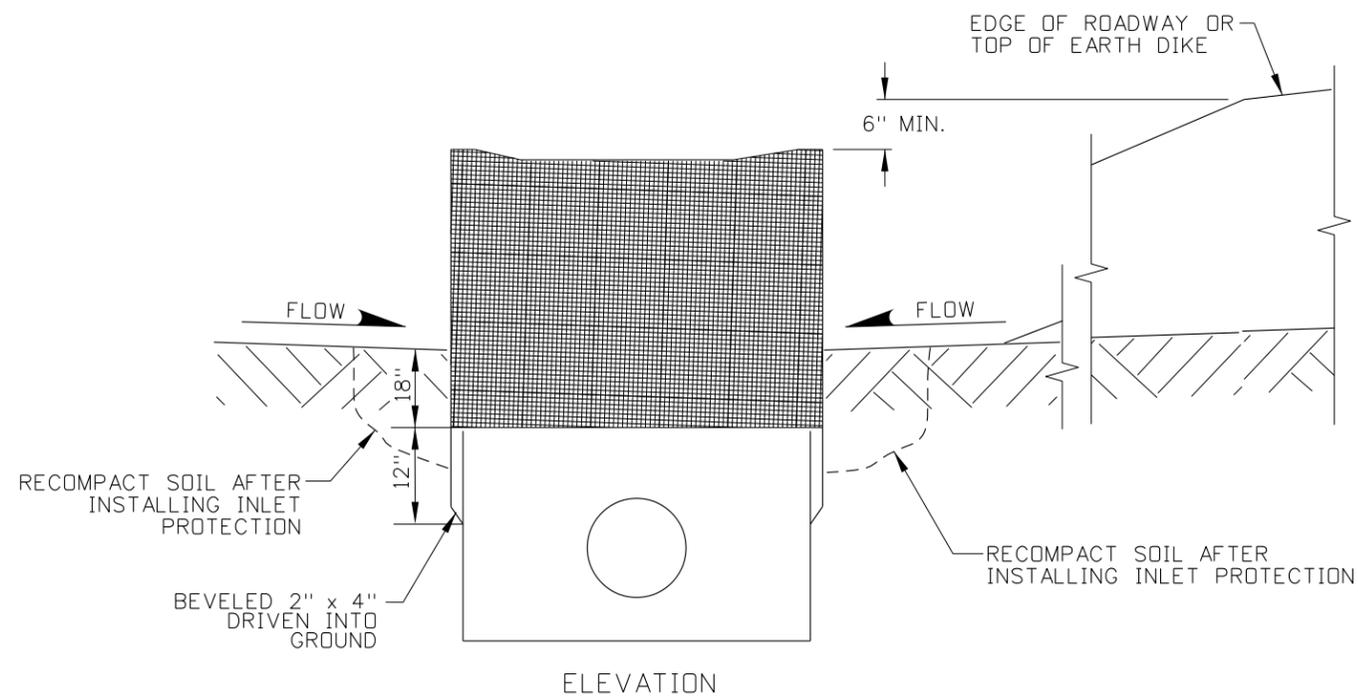
PROJECT NO.	A022(008)
-------------	-----------

TOTAL OWNERSHIP MAP

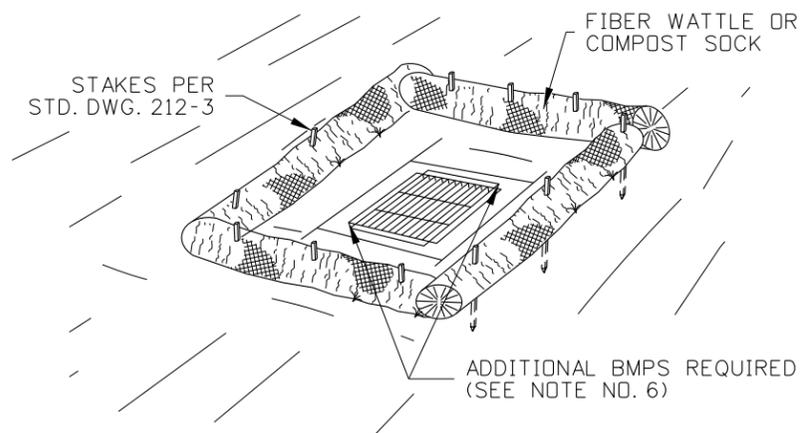
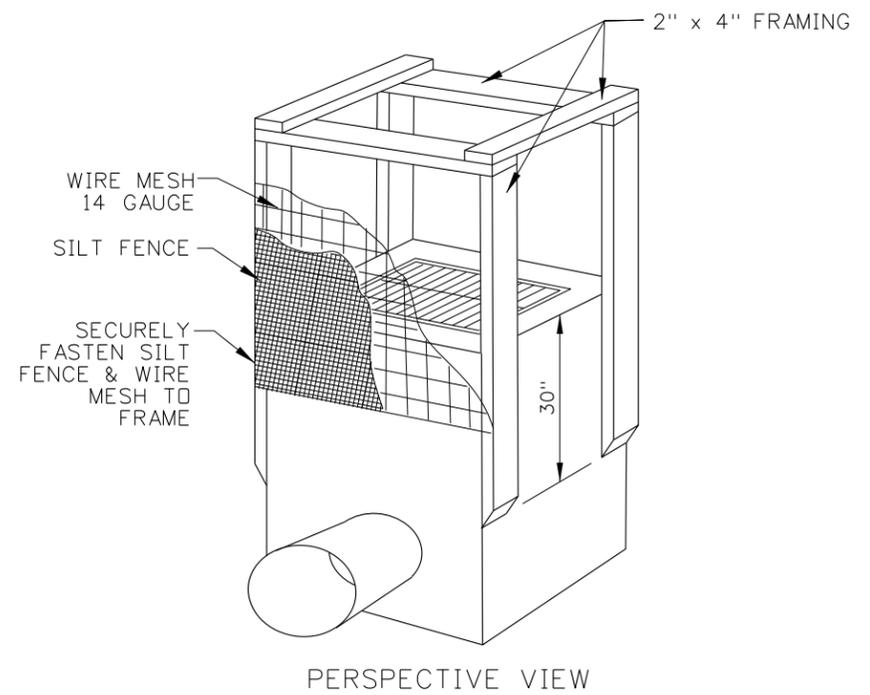
NHS-7046, SCIENCE CENTER; N BLVD TO HOLMES, IDAHO FALLS

ENGLISH
COUNTY BONNEVILLE
KEY NUMBER 22008
SHEET 1 OF 1

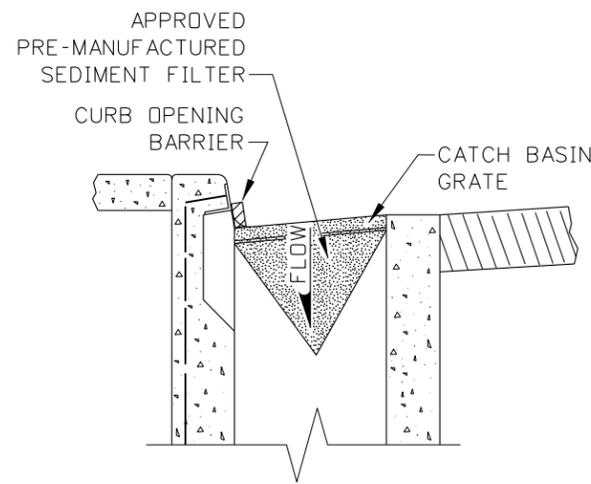




**FRAMED WIRE/FABRIC FILTER**



**FIBER WATTLE FILTER**



**PRE-MANUFACTURED SEDIMENT FILTER FOR INLET GRATE**

**NOTES**

1. SEE THE GENERAL NOTES FOR EROSION CONTROL STANDARD DRAWINGS ON 212-1.
2. REMOVE TRASH, DEBRIS, DUFF, AND MATERIALS THAT MAY INTERFERE WITH THE INLET OR CATCH BASIN PROTECTION FUNCTION PRIOR TO PLACEMENT AND DAILY THEREAFTER OR AS NEEDED.
3. ADJUST TO ENSURE EFFECTIVENESS.
4. FRAMED WIRE/FABRIC FILTER AND FIBER WATTLE FILTERS ARE INTENDED TO BE USED ON STRUCTURES NOT PRESENTLY SURROUNDED BY PAVEMENT.
5. ENSURE WATER DISCHARGING FROM THE INLET MEETS APPLICABLE WATER QUALITY STANDARDS.
6. USE IN CONJUNCTION WITH OTHER INLET PROTECTION DEVICES, NOT AS THE SOLE BMP. SEE SECTION SC-6 IN THE BMP MANUAL.
7. DRAWING NOT TO SCALE.

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	10-10	KEH						
2	10-11	KEH						
3	01-13	RDL						
4	03-21	TWF						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME: 212-7\_0421.dgn  
 DRAWING DATE: JUNE, 1996

**IDAHO TRANSPORTATION DEPARTMENT**



BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN  
 DESIGN/TRAFFIC SERVICES ENGINEER

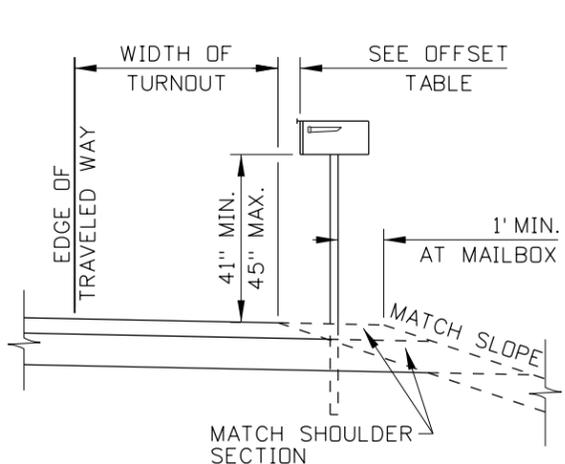
STANDARD DRAWING  
**TEMPORARY EROSION AND SEDIMENT CONTROL INLET PROTECTION**  
 REQUIRES STD. DWG. 212-1

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

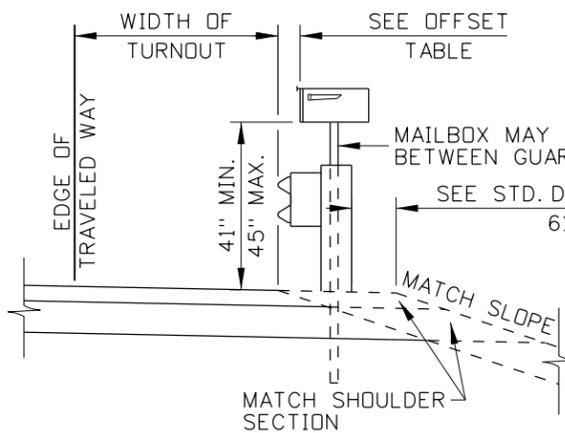
**English**

STANDARD DRAWING NO.  
**212-7**

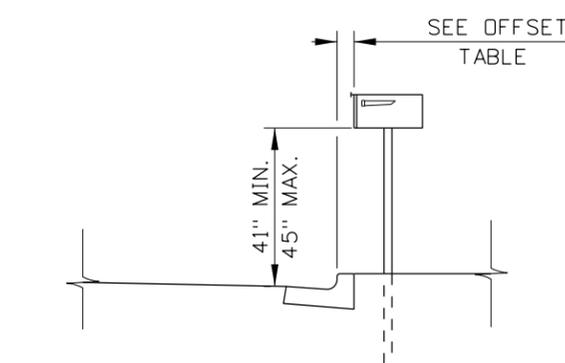
SHEET 1 OF 1



INSTALLATION AT MAILBOX TURNOUT



INSTALLATION BEHIND GUARDRAIL



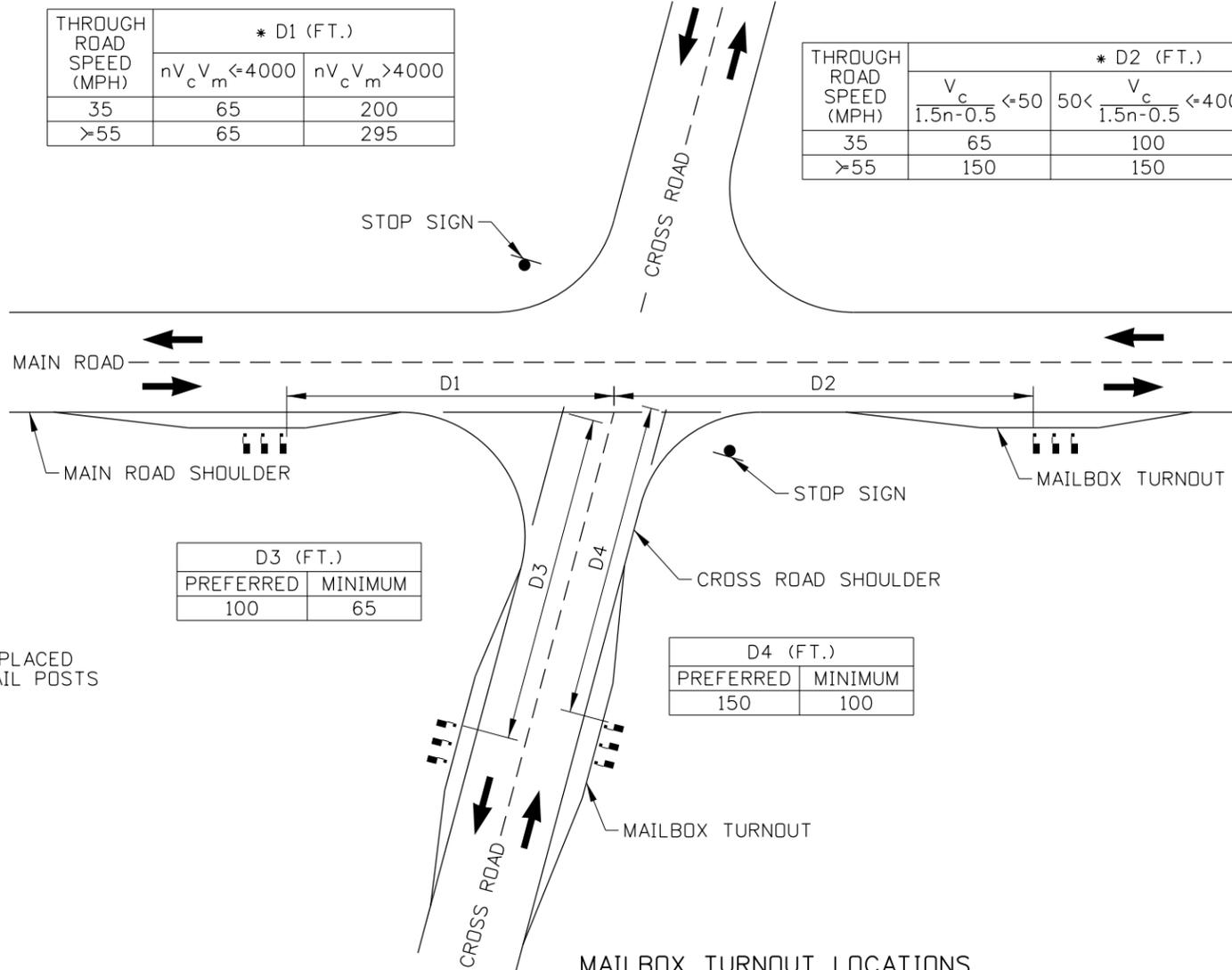
INSTALLATION ON CURBED RESIDENTIAL STREET

TYPICAL MAILBOX INSTALLATIONS

THROUGH ROAD SPEED (MPH)	* D1 (FT.)	
	$nV_c V_m \leq 4000$	$nV_c V_m > 4000$
35	65	200
>55	65	295

THROUGH ROAD SPEED (MPH)	* D2 (FT.)		
	$V_c \leq 50$	$50 < \frac{V_c}{1.5n-0.5} \leq 400$	$\frac{V_c}{1.5n-0.5} > 400$
35	65	100	100
>55	150	150	200

\* n = NUMBER OF MAILBOXES AT MAIL STOP  
 $V_c$  = ADT ON CROSS ROAD  
 $V_m$  = ADT ON MAIN ROAD

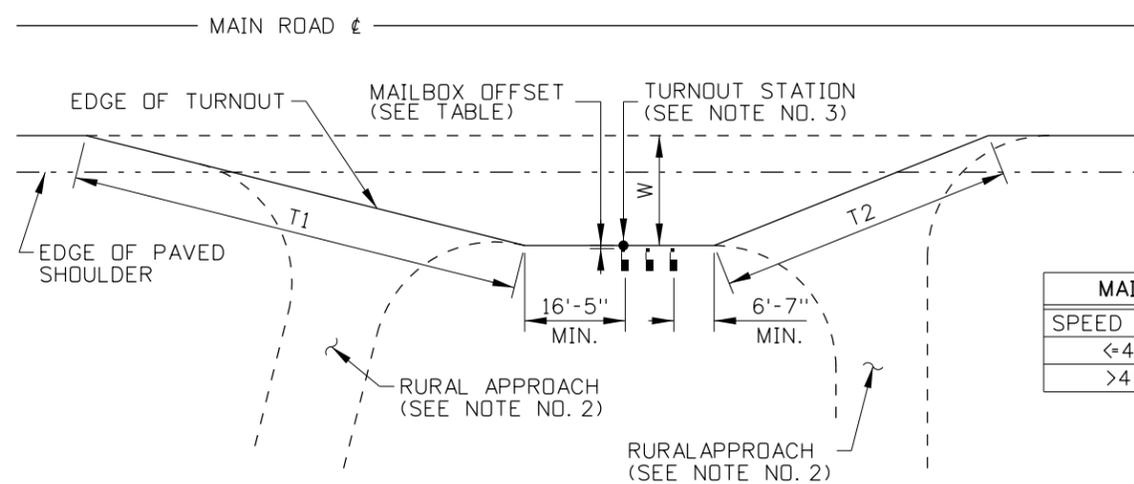


MAILBOX TURNOUT LOCATIONS

ADT	TURNOUT WIDTH (FT.)		MAILBOX OFFSET (IN.)	
	PREFERRED	MINIMUM	PREFERRED	MINIMUM
>10,000	>12	8	6 TO 8	0
1,500 TO 10,000	12	8		
400 TO 1,500	10	8		
<400	8	6		
RESIDENTIAL STREET (NO CURB)	6	0		6
RESIDENTIAL STREET (WITH CURB)	NOT APPLICABLE		8 TO 12	6

NOTES

1. LOCATE MAILBOX TURNOUT SO THAT THE TAPERS DO NOT OVERLAP THE INTERSECTION CURVE RADII.
2. CONSTRUCT MAILBOX ASSEMBLIES IN ACCORDANCE WITH STANDARD DRAWING 634-1. CONSTRUCT RURAL APPROACHES IN ACCORDANCE WITH STANDARD DRAWING 405-1.
3. MEASURE MAILBOX TURNOUT STATION AND OFFSET AT THE EDGE OF THE TURNOUT PERPENDICULAR TO THE FIRST MAILBOX.
4. NOT TO SCALE.



MAILBOX TURNOUT

MAILBOX TAPER		
SPEED (MPH)	T1	T2
<=40	4:1	2.5:1
>40	20:1	12:1

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	11-02	MSM						
2	06-05	MSM						
3	01-13	RDL						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME: 405-2\_0213.dgn  
 DRAWING DATE: SEPTEMBER, 1993

**IDAHO TRANSPORTATION DEPARTMENT**

BOISE IDAHO

ORIGINAL SIGNED BY: LOREN THOMAS  
 HIGHWAYS PROGRAM OVERSIGHT ENGINEER

ORIGINAL SIGNED BY: TOM COLE  
 CHIEF ENGINEER

STANDARD DRAWING

**MAILBOX TURNOUT**

REQUIRES STD. DWG. 405-1

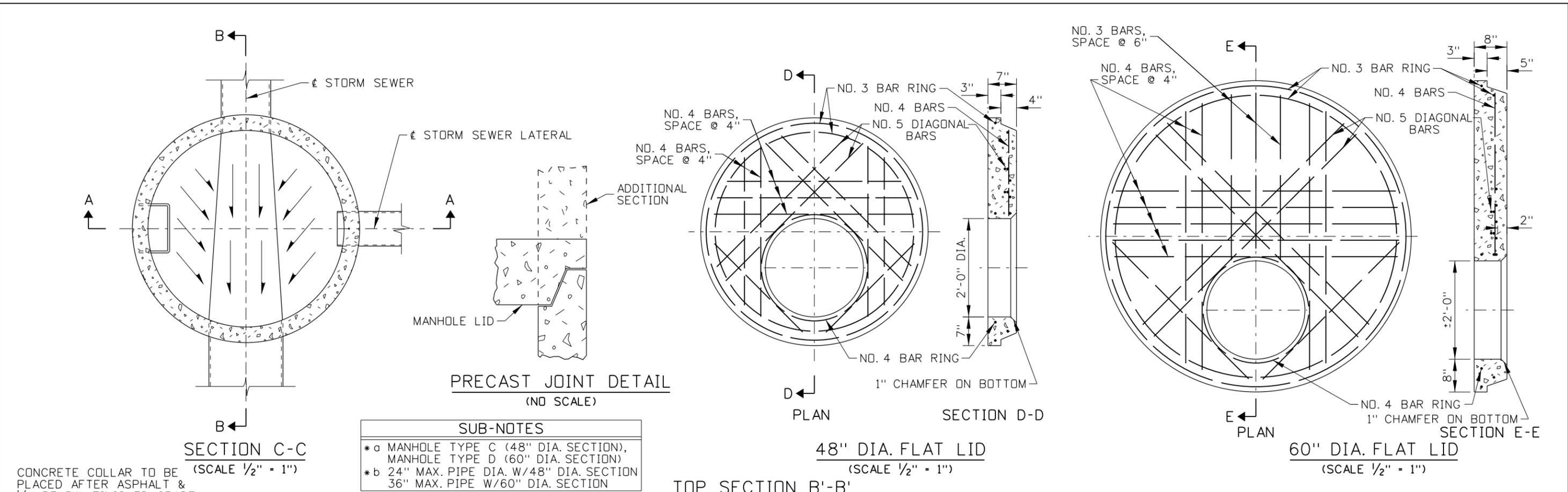
ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

**English**

STANDARD DRAWING NO. **405-2**

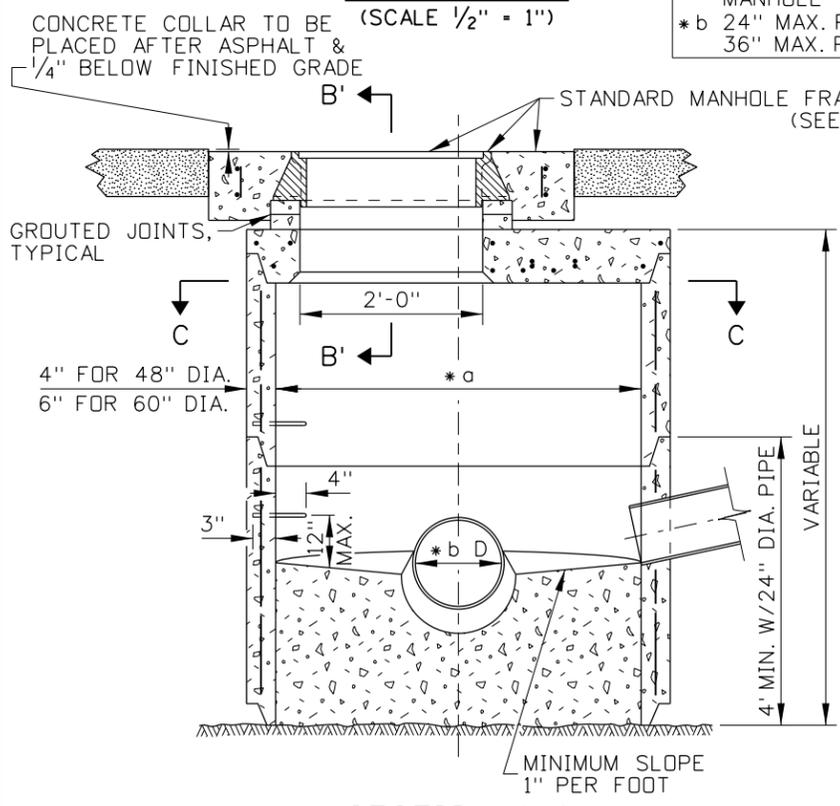
SHEET 1 OF 1

ORIGINAL SIGNED BY: RYAN D. LANCASTER  
 DATE ORIGINAL SIGNED: JANUARY 31, 2013

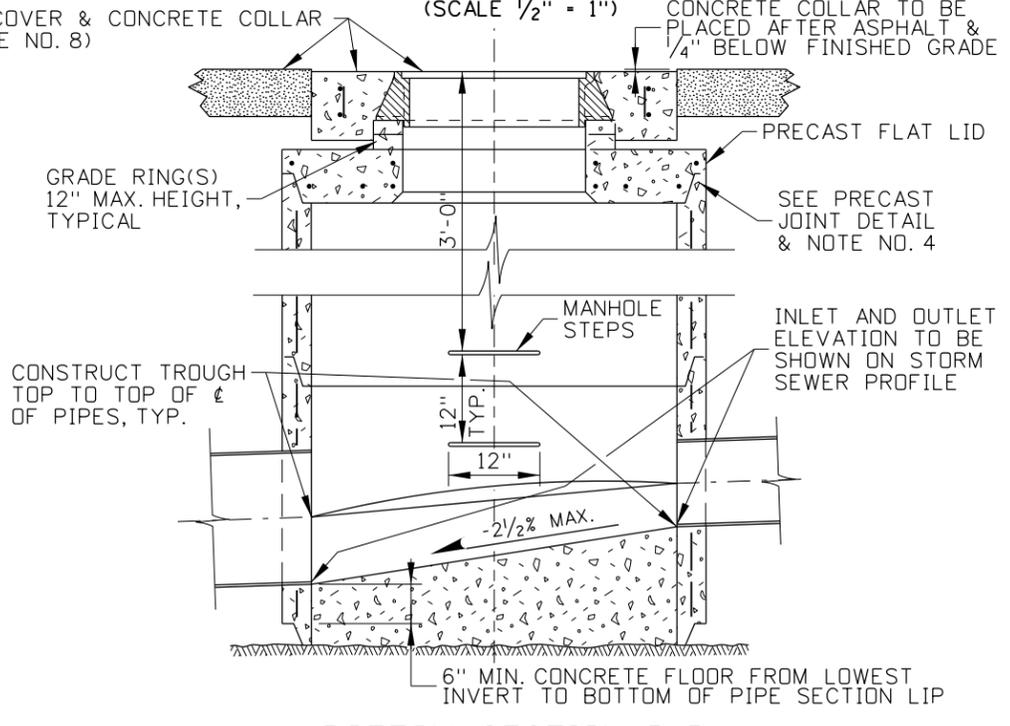


**SUB-NOTES**

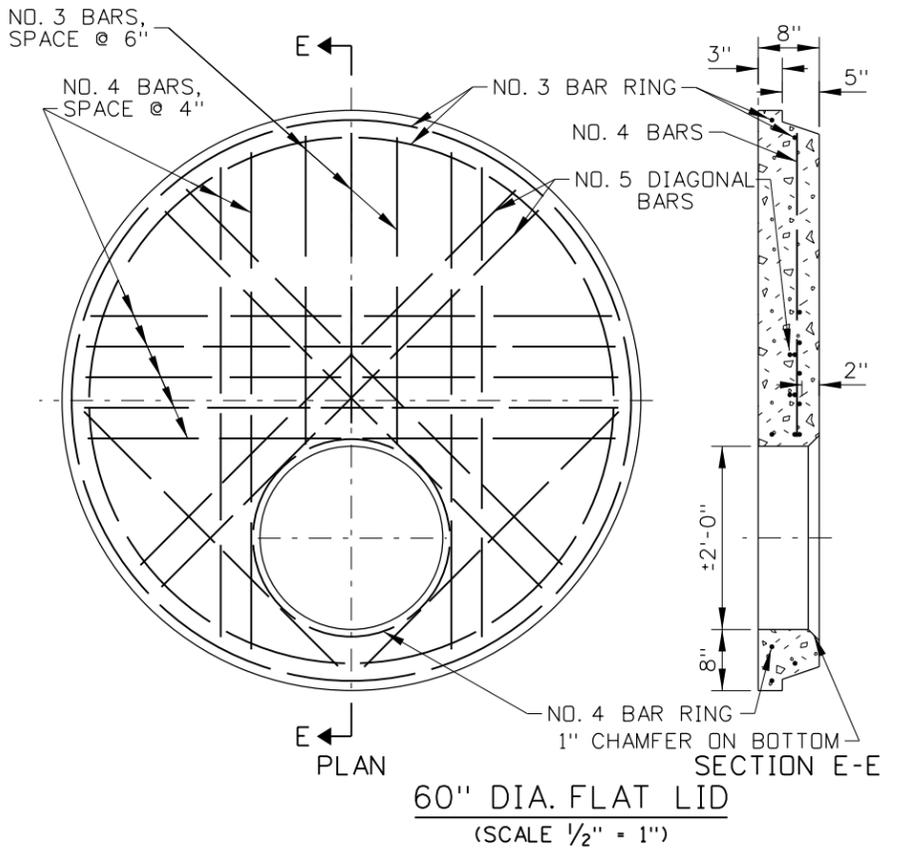
- \* a MANHOLE TYPE C (48" DIA. SECTION), MANHOLE TYPE D (60" DIA. SECTION)
- \* b 24" MAX. PIPE DIA. W/48" DIA. SECTION 36" MAX. PIPE W/60" DIA. SECTION



**SECTION A-A**  
(SCALE 1/2" = 1")



**BOTTOM SECTION B-B**  
(SCALE 1/2" = 1")



**60" DIA. FLAT LID**  
(SCALE 1/2" = 1")

**NOTES**

1. CARE SHALL BE TAKEN TO AVOID PLACING MANHOLES IN WHEEL PATHS.
2. MANHOLES TYPE C & D MAY BE EITHER PRECAST OR CAST-IN-PLACE. PRECAST MANHOLES SHALL MEET THE REQUIREMENTS OF ASTM C478. PRIOR APPROVAL OF THE SHOP DRAWING WILL BE REQUIRED ON PRECAST UNITS WITH FLOOR AND/OR PIPE OPENINGS.
3. CAST-IN-PLACE MANHOLES TYPE C & D SHALL CONFORM TO SECTION 609 - MINOR STRUCTURES OF THE CURRENT "ITD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION". CAST-IN-PLACE MANHOLES SHALL HAVE 6" WALLS AND MINIMUM 8" FLOORS. THE METAL REINFORCEMENT USED ON THE WALLS AND FLOORS SHALL BE NO. 4 BARS. ALL REINFORCEMENT SHALL HAVE A MINIMUM CONCRETE COVER OF 2" AND/OR 3" IF CAST AGAINST EARTH.
4. ALL CONNECTIONS AND BROKEN AREAS SHALL BE GROUTED SMOOTH TO FORM A WATER TIGHT MANHOLE. MASTIC SEALANTS, GASKETS, AND O-RINGS USED ON PRECAST SECTION(S) CONSTRUCTION JOINT(S) SHALL CONFORM TO AASHTO AND ASTM REQUIREMENTS.
5. BENDS IN THE MAIN STORM SEWER SHALL BE MADE BY FORMING CURVED CHANNELS WITHIN THE MANHOLE. THE INSIDE OF THE TOP LATERAL PIPES MAY NOT BE LOWER THAN THE INSIDE TOP OF MAIN SEWER PIPES. WHEN THE INVERT OF THE LATERAL PIPE FALLS BELOW THE 1" PER FOOT MINIMUM SLOPE LINE, THE CHANNEL SHALL BE FORMED FROM THE LATERAL PIPE TO THE MAIN SEWER.
6. THE CONCRETE MANHOLE LIDS SHALL BE DESIGNED FOR AASHTO H-25 LIVE LOADS.
7. WHEN MANHOLE STEPS ARE REQUIRED AN ECCENTRIC CONE SECTION SHALL BE USED. PLASTIC COATED MANHOLE STEPS SHALL BE PLACED IN MANHOLES GREATER THAN 4' IN DEPTH. MANHOLE STEPS SHALL CONFORM TO IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION, STANDARD DRAWING SD-509 AND SECTION 504.06 PLASTIC COATED MANHOLE STEPS.
8. USE OF A PLASTIC MANHOLE FRAME SUPPORT, I.E. WHIRLY-GIG OR COMPARABLE DEVICE, IS AN ACCEPTABLE CONSTRUCTION OPTION (FOR FURTHER INFORMATION REFER TO STANDARD DRAWING 605-13).

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

ORIGINAL SIGNED BY: MILDRED L. MILLER  
DATE ORIGINAL SIGNED: MAY 16, 2007

REVISIONS							
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE
1	12-92	MSM					
2	11-01	MSM					
3	12-04	MSM					
4	05-07	MSM					

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 605-12\_0507.dgn

DRAWING DATE: MAY, 1981

**IDAHO TRANSPORTATION DEPARTMENT**



BOISE IDAHO

ORIGINAL SIGNED BY: LOREN THOMAS  
ASSISTANT CHIEF ENGINEER (DEVELOPMENT)

ORIGINAL SIGNED BY: STEVEN HUTCHINSON  
CHIEF ENGINEER

STANDARD DRAWING

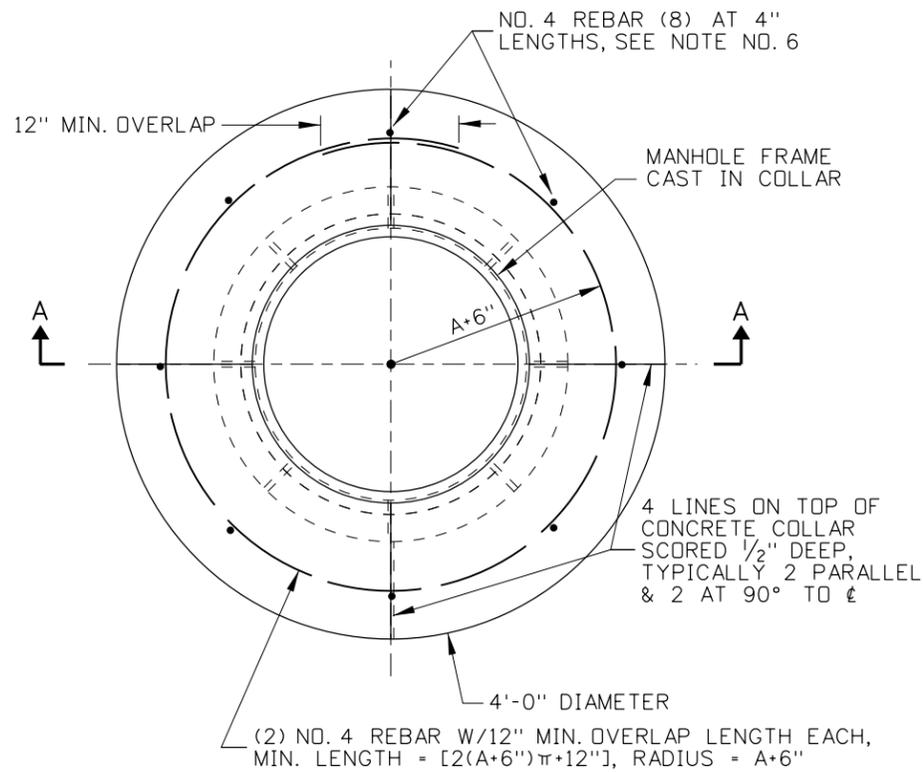
**MANHOLE TYPES C & D**

REQUIRES STD. DWG. 605-13

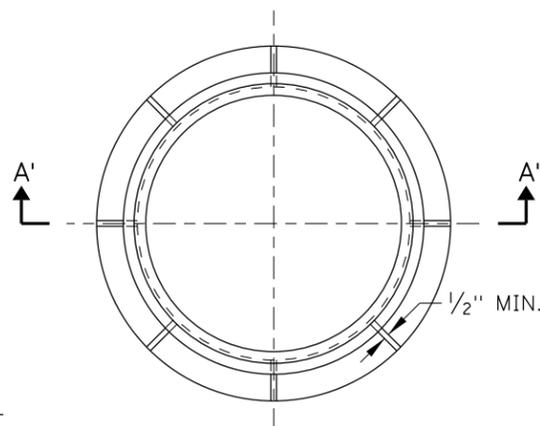
**English**

STANDARD DRAWING NO. **605-12**

SHEET 1 OF 1

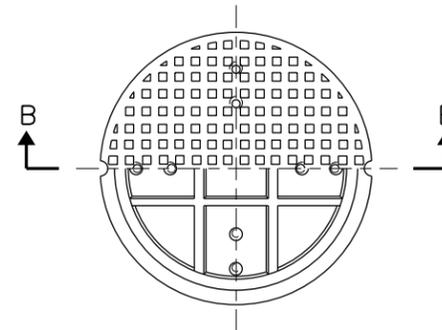


CONCRETE COLLAR PLAN



FRAME PLAN

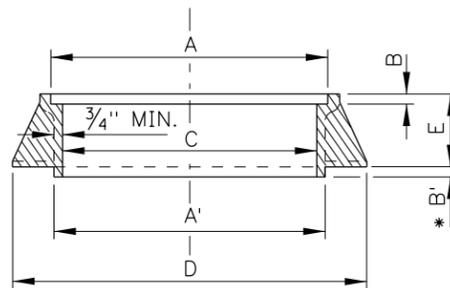
COVER PLAN - TOP HALF VIEW



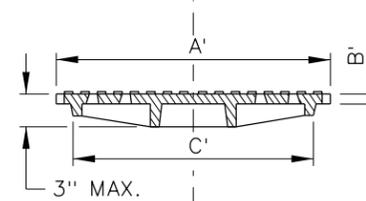
COVER PLAN - BOTTOM HALF VIEW

STANDARD MANHOLE FRAME BASIC DIMENSIONS	
A	24 1/8"
B	1"
C	21" MIN.
D	31" MIN.
E	5"
STANDARD MANHOLE COVER BASIC DIMENSIONS	
A'	23 7/8"
* B'	1"
C'	20"

\* B' MANHOLE FRAME BOTTOM TO FIT INSIDE ANOTHER FRAME LID OPENING



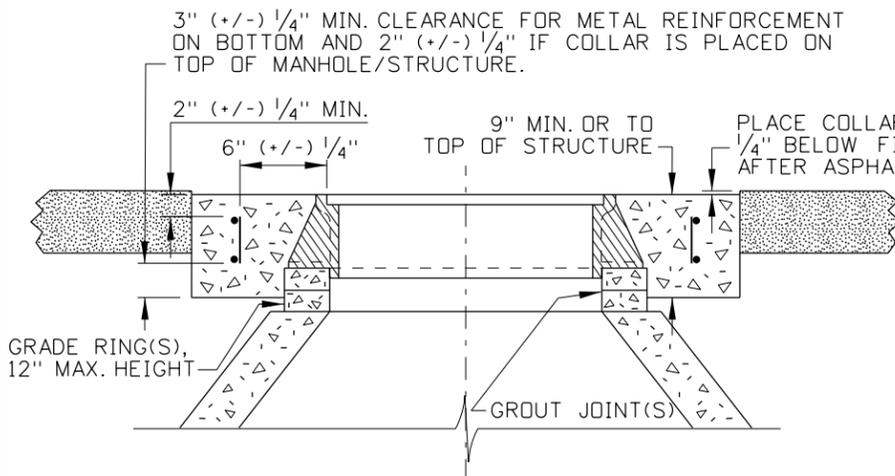
SECTION A-A'



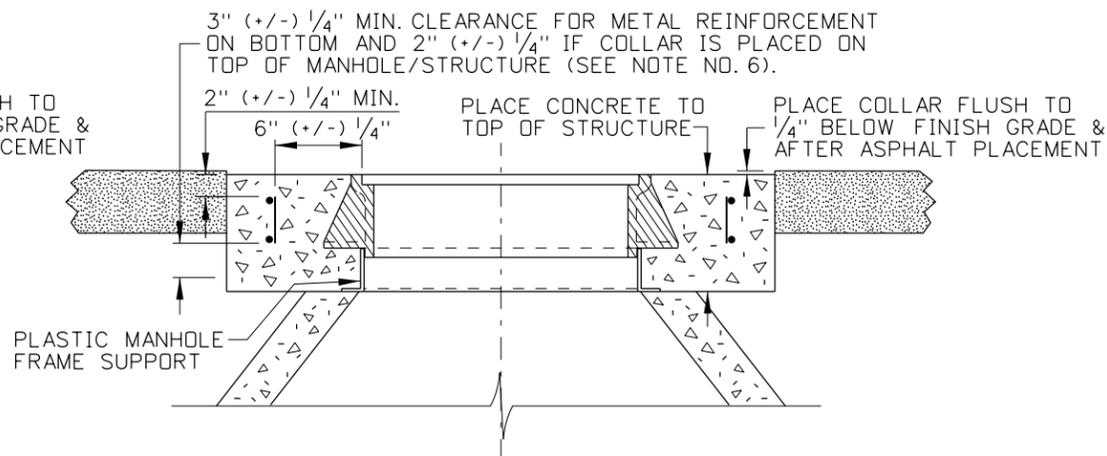
SECTION B-B

NOTES

1. THE MINIMUM WEIGHT OF THE FRAMES SHALL BE 150LBS. AND THE MINIMUM WEIGHT OF COVERS SHALL BE 110LBS. THESE FRAMES AND COVERS ARE TO BE USED IN ALL TRAFFIC AND NON-TRAFFIC AREAS.
2. FRAMES AND COVERS SHALL CONFORM TO AASHTO M 306-05 AND SHALL BE MADE OF CLASS 35B GRAY IRON.
3. THE LAYOUT AND DIMENSIONS OF THE WEBS ARE TYPICAL MINIMUMS. PROPRIETARY MANHOLE COVERS WITHOUT WEBS ARE ACCEPTABLE PROVIDED THEY MEET AASHTO M 306-05 AND MINIMUM WEIGHT REQUIREMENTS. ALL COVER DESIGNS SHALL BE PROVIDED WITH AN ANTI-SHIFT SKIRT THAT EXTENDS A MINIMUM OF 1" BELOW THE COVER SEAT.
4. THE SURFACE SHOWN IS FOR ILLUSTRATION ONLY. ANY SURFACE DESIGN, OTHER THAN SMOOTH, MAY BE USED UPON APPROVAL.
5. A CAST-IN-PLACE CONCRETE COLLAR SHALL BE PLACED AROUND THE MANHOLE FRAME UNLESS OTHERWISE DIRECTED. THE CONCRETE COLLAR SHALL MEET THE REQUIREMENTS OF SECTION 609 - MINOR STRUCTURES, OF THE CURRENT ITD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
6. THE CONCRETE COLLAR SHALL BE PLACED TO THE TOP OF THE MANHOLE/STRUCTURE OR HAVE A MINIMUM THICKNESS OF 9". WHEN THE CONCRETE COLLAR IS PLACED ON TOP OF A MANHOLE/STRUCTURE THE THICKNESS SHALL NOT BE LESS THAN THE "F DIMENSION" OF THE FRAME. THE VERTICAL METAL REINFORCEMENT LENGTHS MAY BE ADJUSTED WHEN THE COLLAR IS PLACED ON TOP OF A STRUCTURE/MANHOLE.
7. USE OF A PLASTIC MANHOLE FRAME SUPPORT, I.E. WHIRLY-GIG OR COMPARABLE DEVICE, IS AN ACCEPTABLE CONSTRUCTION OPTION.
8. NOT TO SCALE.



MANHOLE FRAME SUPPORTED WITH CONC. COLLAR RINGS (SEE NOTE NO. 6)



PLASTIC MANHOLE FRAME SUPPORT (SEE NOTE NO. 7)

SECTION A-A

REVISIONS							
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE
1	06-61	NS	6	10-05	MSM		
2	02-74		7	06-07	MSM		
3	12-92	MSM	8	09-10	PLR		
4	05-95	MSM					
5	11-01	MSM					

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME: 605-13\_1010.dgn  
 DRAWING DATE: JUNE, 1961

IDAHO TRANSPORTATION DEPARTMENT



BOISE IDAHO

ORIGINAL SIGNED BY: LOREN THOMAS  
 ASSISTANT CHIEF ENGINEER (DEVELOPMENT)  
 ORIGINAL SIGNED BY: TOM COLE  
 CHIEF ENGINEER

STANDARD DRAWING

MANHOLE FRAME, COVER, & CONCRETE COLLAR

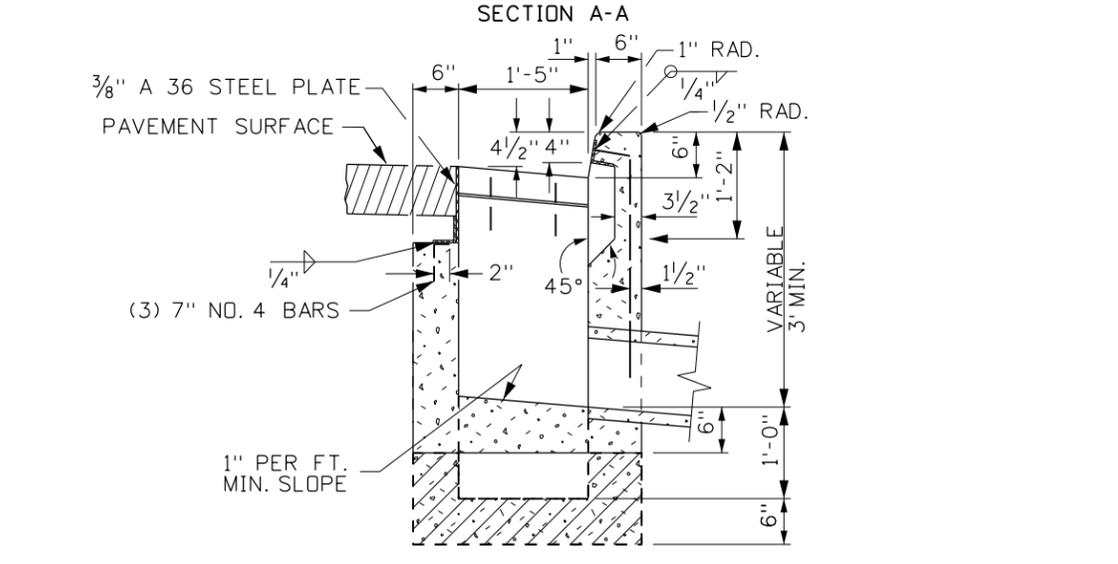
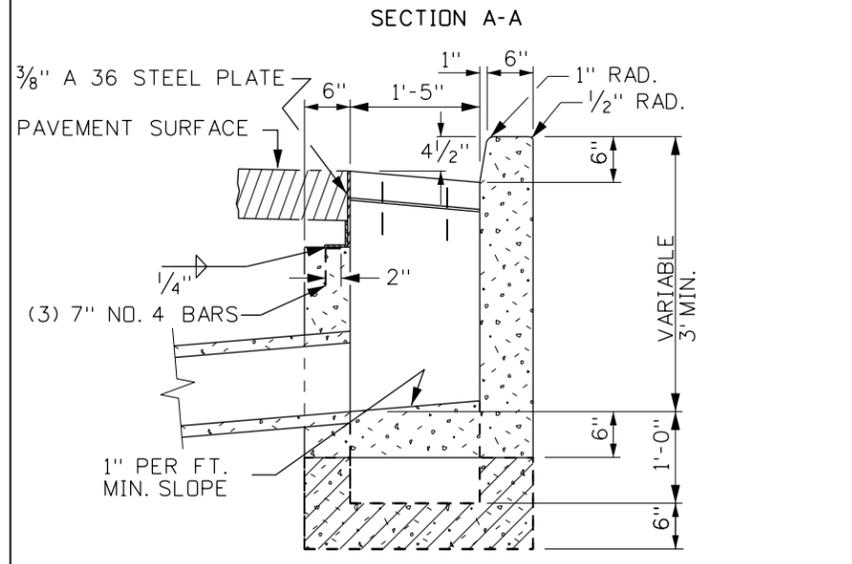
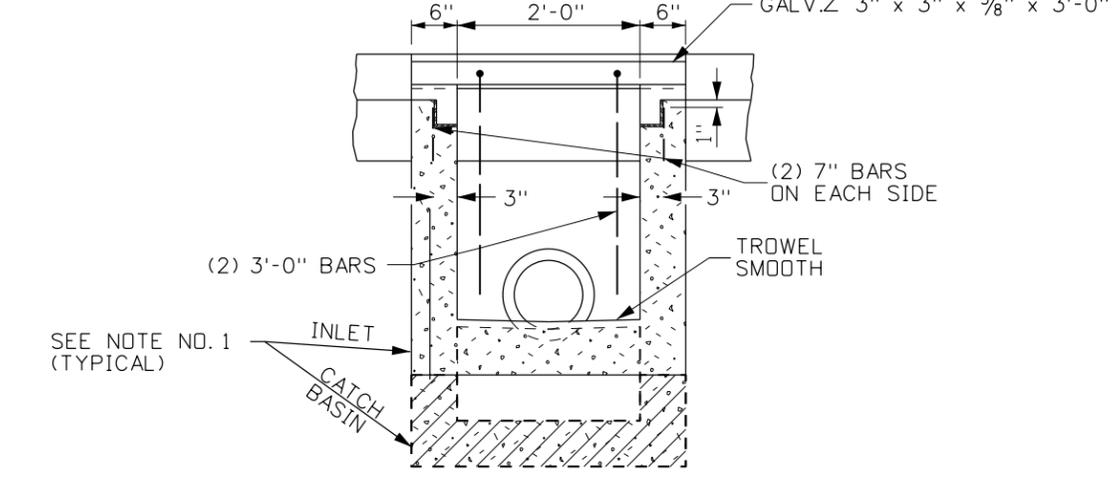
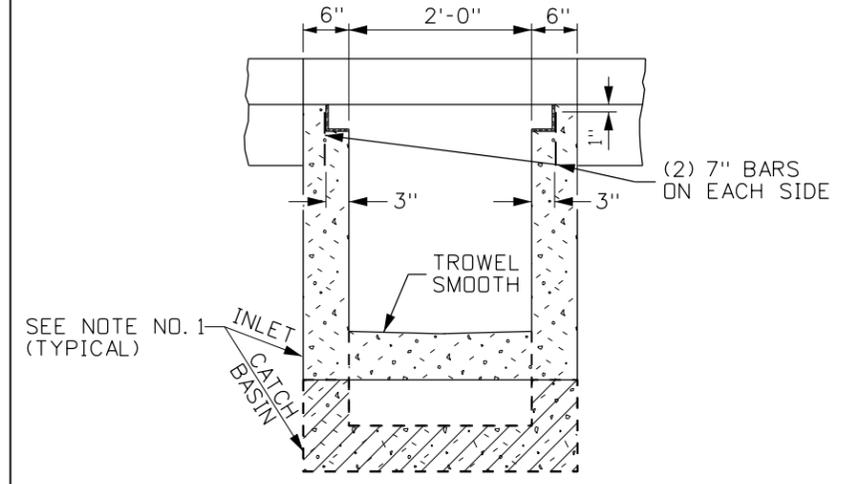
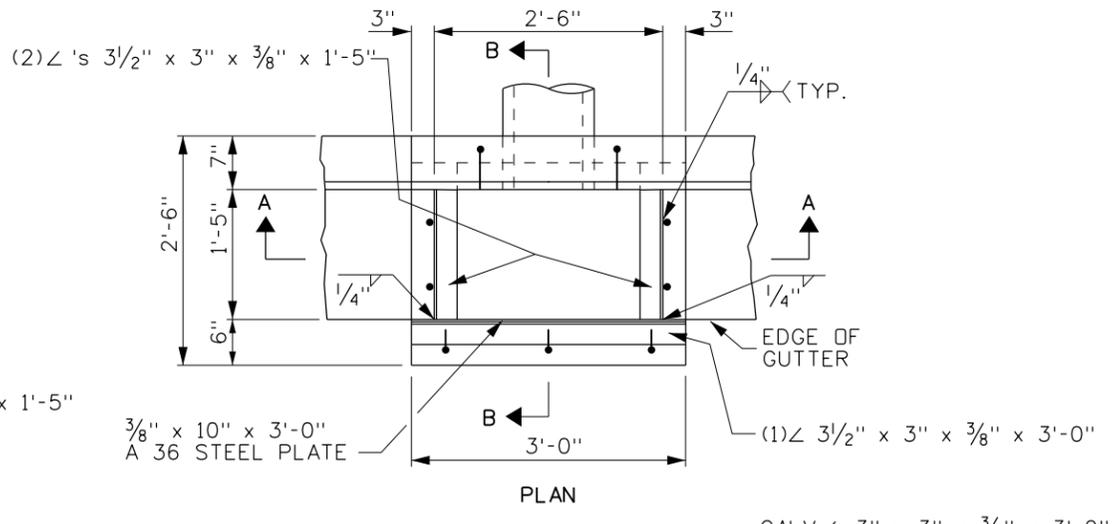
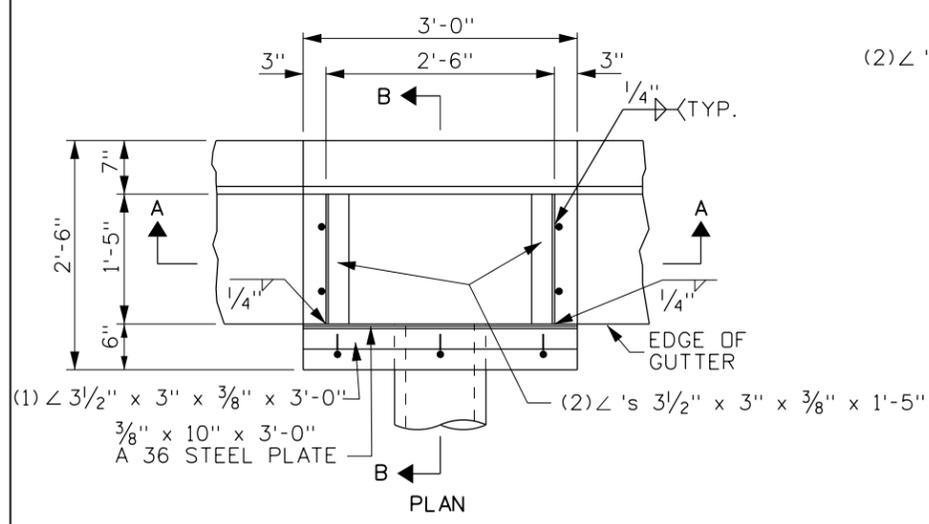
English

STANDARD DRAWING NO. 605-13

SHEET 1 OF 1

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

ORIGINAL SIGNED BY: TED E. MASDN  
 DATE ORIGINAL SIGNED: OCTOBER 26, 2010



SECTION B-B  
INLET - TYPE 1  
CATCH BASIN - TYPE 1

SECTION B-B  
INLET - TYPE 2  
CATCH BASIN - TYPE 2

**NOTES**

- PATTERNS USED IN DRAWING:  
 INLET SECTIONS:   
 CATCH BASIN BOTTOMS:   
 PAVEMENT:
- INLETS AND CATCH BASINS MAY BE EITHER PRECAST OR CAST-IN-PLACE. PRECAST UNITS SHALL MEET THE REQUIREMENTS OF ASTM C 913. (PRIOR APPROVAL OF SHOP DRAWINGS WILL BE REQUIRED ON MODIFIED UNITS.)
- A 1" SIDE DRAFT IS ALLOWED FOR FORM REMOVAL.
- CAST-IN-PLACE INLETS AND CATCH BASINS SHALL CONFORM TO SECTION 609 - MINOR STRUCTURES OF THE CURRENT ITD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- THE GRADE LINE OF THE TOP INSIDE OF ANY PIPE SHALL ENTER AT A POINT NO LOWER THAN THE TOP INSIDE OF THE OUTLET PIPE.
- PIPES CAN ENTER OR LEAVE THE BOX IN ANY DIRECTION. ALL CONNECTIONS AND BROKEN AREAS SHALL BE GROUTED SMOOTH.
- STEEL ANGLES SHALL BE SET SO THAT EACH BEARING BAR OF PREFABRICATED GRATE SHALL HAVE FULL BEARING ON BOTH ENDS. THE FINISHED TOP OF CONCRETE SHALL BE EVEN WITH THE ANGLE/GRATE SURFACE. THE STRUCTURAL STEEL NEED NOT BE PAINTED BUT SHALL MEET THE REQUIREMENTS OF ASTM A 36.
- ALL METAL REINFORCEMENT USED SHALL BE NO. 4 BARS. THE METAL REINFORCEMENT SHALL BE SMOOTH CUT TO ACCOMMODATE PIPES.
- GRAY IRON CAST TO THE DIMENSIONS GIVEN FOR THE STEEL GRATES MAY BE USED. THE CASTINGS SHALL CONFORM TO AASHTO M306 CLASS 35B GRAY IRON CASTINGS.
- INLET/CATCH BASIN GRATES MAY EITHER BE RESISTANCE WELDED OR ARC WELDED. IN EITHER CASE THE GRATE SHALL BE TRUE AND FLUSH.
- GRATE B WILL BE USED ONLY WHEN SPECIFIED.
- NOT TO SCALE.

REVISIONS							
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE
1	10-80		6	09-94	MSM	11	11-08
2	04-82		7	06-97	MSM		
3	03-84		8	06-01	MSM		
4	01-89	GB	9	11-04	MSM		
5	12-93	MSM	10	05-07	MSM		

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME: 605-20\_1108.dgn  
 DRAWING DATE: JULY, 1961

**IDAHO TRANSPORTATION DEPARTMENT**

BOISE IDAHO

ORIGINAL SIGNED BY: LOREN THOMAS  
 ASSISTANT CHIEF ENGINEER (DEVELOPMENT)

ORIGINAL SIGNED BY: TOM COLE  
 CHIEF ENGINEER

STANDARD DRAWING

**INLETS & CATCH BASINS TYPES 1, 2, & 3**

REQUIRES SHEET 2 OF 2

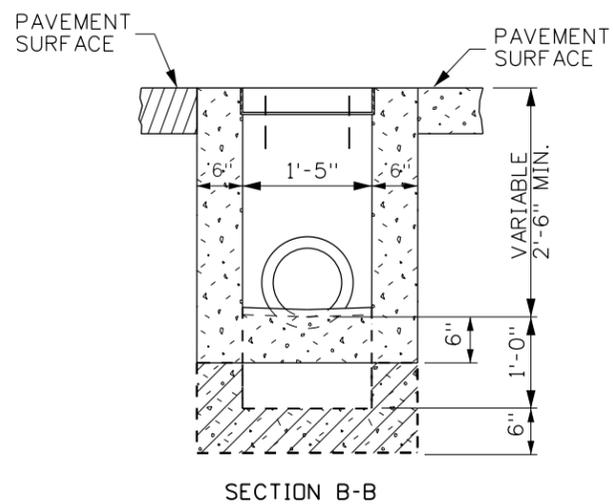
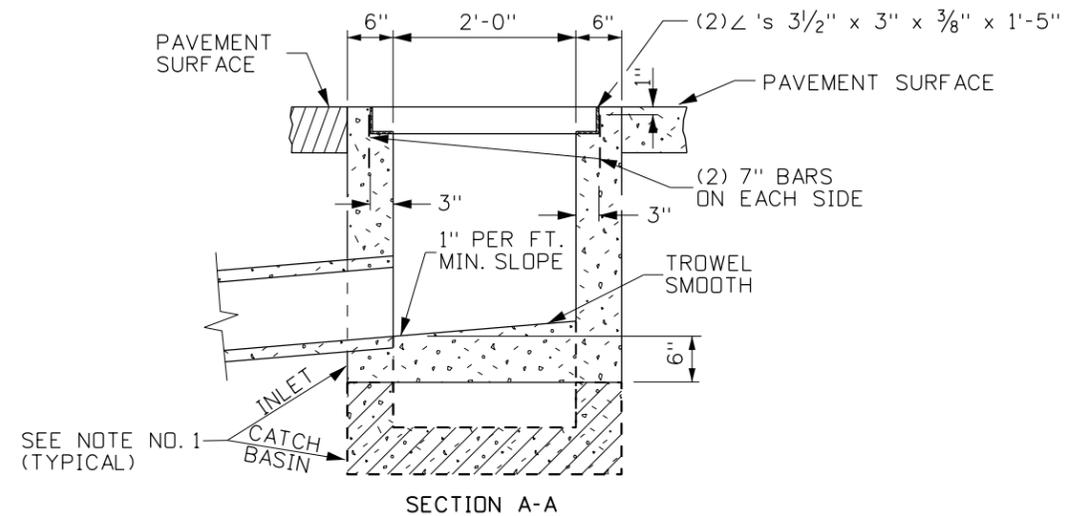
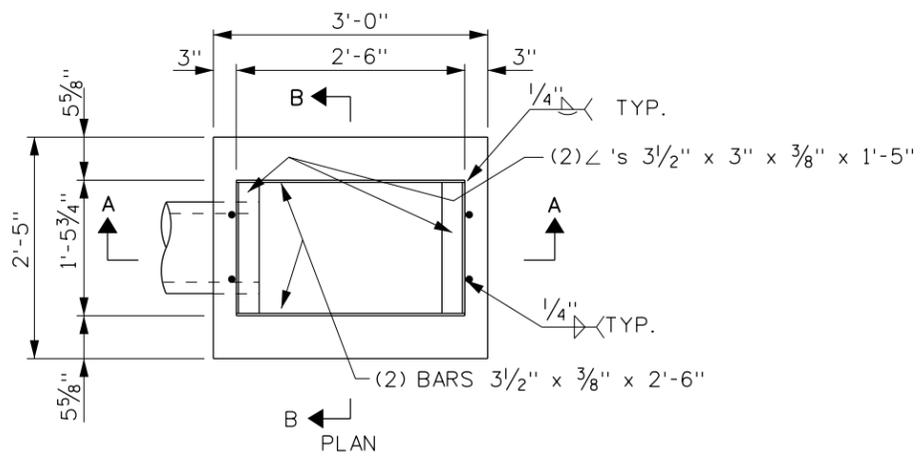
ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

**English**

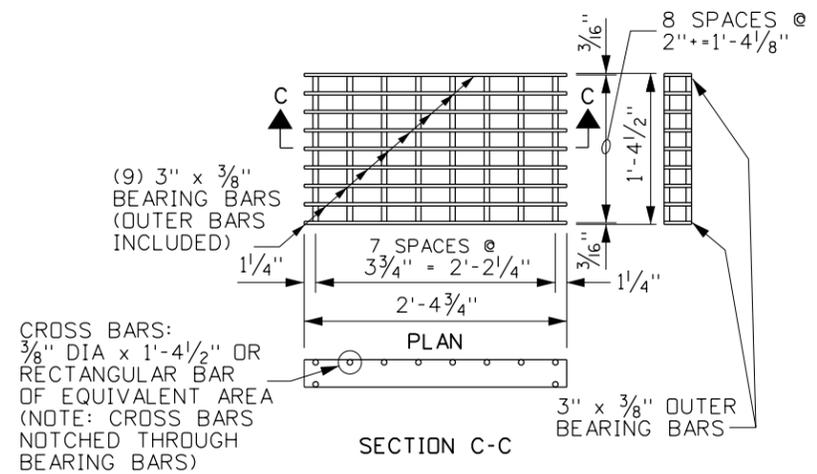
STANDARD DRAWING NO. **605-20**

SHEET 1 OF 2

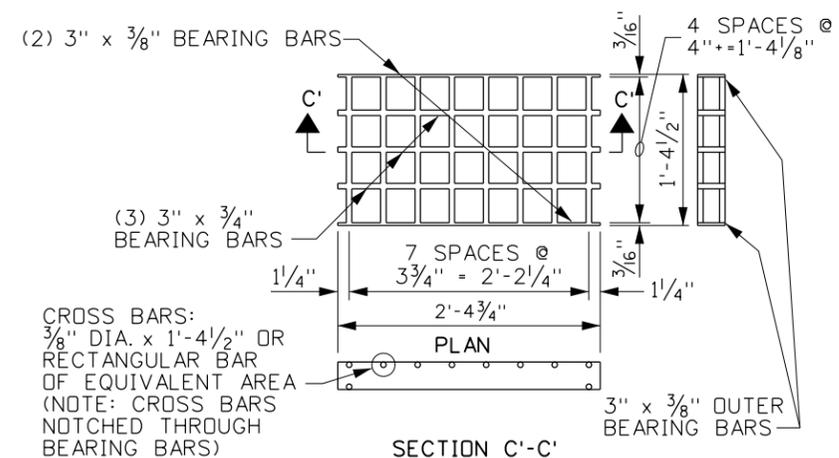
ORIGINAL SIGNED BY: TED E. MASDN  
 DATE ORIGINAL SIGNED: NOVEMBER 3, 2008



SECTION B-B  
INLET - TYPE 3  
CATCH BASIN - TYPE 3



SECTION C-C  
GRATE A (STEEL)  
(WEIGHT: APPROXIMATELY 88 LBS., SEE NOTE 9 & 10)



SECTION C'-C'  
GRATE B (STEEL)  
(WEIGHT: APPROXIMATELY 79 LBS., SEE NOTE 9 & 10)

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	10-80		6	09-94	MSM	11	11-08	JRV
2	04-82		7	06-97	MSM			
3	03-84		8	06-01	MSM			
4	01-89	GB	9	11-04	MSM			
5	12-93	MSM	10	05-07	MSM			

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
CADD FILE NAME: 605-20\_1108.dgn  
DRAWING DATE: JULY, 1961

**IDAHO TRANSPORTATION DEPARTMENT**



BOISE IDAHO

ORIGINAL SIGNED BY: LOREN THOMAS  
ASSISTANT CHIEF ENGINEER (DEVELOPMENT)

ORIGINAL SIGNED BY: TOM COLE  
CHIEF ENGINEER

STANDARD DRAWING  
**INLETS & CATCH BASINS TYPES 1, 2, & 3**  
REQUIRES SHEET 1 OF 2

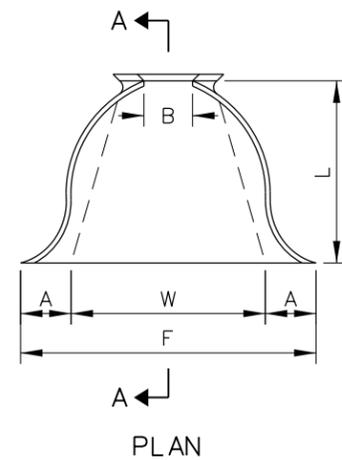
ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

**English**

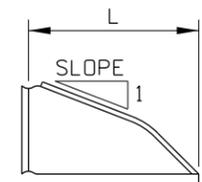
STANDARD DRAWING NO. **605-20**

SHEET 2 OF 2

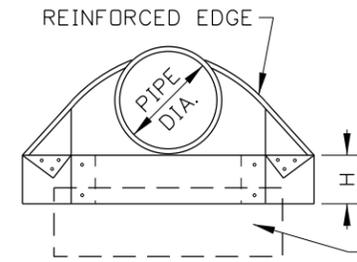
ORIGINAL SIGNED BY: TED E. MASDN  
DATE ORIGINAL SIGNED: NOVEMBER 3, 2008



PLAN

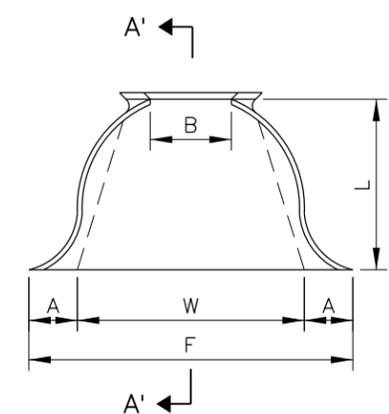


SECTION A-A (TYPICAL)

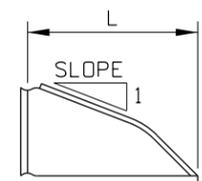


ELEVATION

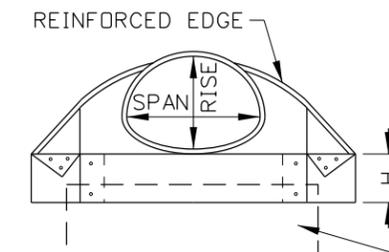
APRON FOR ROUND METAL PIPE  
(GALVANIZED STEEL)



PLAN



SECTION A'-A' (TYPICAL)



ELEVATION

APRON FOR METAL ARCH PIPE  
(GALVANIZED STEEL)

DIMENSIONS TABLE									
PIPE DIA.	THICK-NESS (1000'S)	ALL DIMENSIONS ARE IN INCHES						APPROX. SLOPE	BODY
		A (MIN.)	B	H (MIN.)	F (MIN.)	L ±2"	W (MAX.)		
12	0.064	5	7	6	22	21	24	2 1/2:1	1 PC.
15	0.064	7	8	6	28	26	30	2 1/2:1	1 PC.
18	0.064	7	10	6	34	31	36	2 1/2:1	1 PC.
21	0.064	8	12	6	40	36	42	2 1/2:1	1 PC.
24	0.064	9	13	6	46	41	48	2 1/2:1	1 PC.
30	0.079	13	16	8	55	51	60	2 1/2:1	1 PC.
36	0.079	11	19	9	70	60	72	2 1/2:1	2 PC.
42	0.109	15	25	10	82	69	84	2 1/2:1	2 PC.
48	0.109	17	29	12	88	78	90	2 1/2:1	2 PC.
54	0.109	17	33	12	100	84	102	2:1	2 PC.
60	0.109	17	36	12	112	87	114	2 1/2:1	3 PC.
66	0.109	17	39	12	118	87	120	2 1/2:1	3 PC.
72	0.109	17	44	12	120	87	126	2 1/2:1	3 PC.
78	0.109	17	48	12	130	87	132	2 1/2:1	3 PC.
84	0.109	17	52	12	136	87	138	2 1/2:1	3 PC.

DIMENSIONS TABLE										
PIPE-ARCH		THICK-NESS (1000'S)	ALL DIMENSIONS ARE IN INCHES						APPROX. SLOPE	BODY
SPAN IN.	RISE IN.		A (MIN.)	B	H (MIN.)	F (MIN.)	L ±2"	W (MAX.)		
17	13	0.064	5	9	6	28	20	50	2 1/2:1	1 PC.
21	15	0.064	6	11	6	34	24	58	2 1/2:1	1 PC.
24	18	0.064	7	12	6	40	28	63	2 1/2:1	1 PC.
28	20	0.064	7	16	6	46	32	70	2 1/2:1	1 PC.
35	24	0.079	9	16	6	58	39	85	2 1/2:1	1 PC.
42	29	0.079	11	18	8	73	46	104	2 1/2:1	1 PC.
49	33	0.109	12	21	9	82	53	117	2 1/2:1	2 PC.
57	38	0.109	16	26	10	88	62	130	2 1/2:1	2 PC.
64	43	0.109	17	30	12	100	79	142	2 1/4:1	2 PC.
71	47	0.109	17	36	12	112	77	156	2 1/4:1	2 PC.
77	52	0.109	17	36	12	124	77	167	2:1	3 PC.
83	57	0.109	17	44	12	130	77	179	2:1	3 PC.

NOTES

- ALL 3-PIECE BODIES (APRONS WITH PIPE DIA. 60 IN. & LARGER) TO HAVE 0.109 IN. SIDES AND 0.138 IN. CENTER PANELS. MULTIPLE PANEL BODIES TO HAVE LAP SEAMS WHICH ARE TO BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS.
- THE REINFORCED EDGES OF GALVANIZED STEEL APRONS, FOR ROUND METAL PIPE SIZES 60 IN. THROUGH 84 IN. AND FOR ARCH METAL PIPE SIZES 77x62 IN. THROUGH 83x57 IN., ARE TO BE SUPPLEMENTED BY GALVANIZED STIFFENER ANGLES. THE ANGLES ARE TO BE ATTACHED BY GALVANIZED BOLTS AND NUTS.
- ANGLE REINFORCEMENT WILL BE PLACED UNDER THE CENTER PANEL SEAMS ON ARCH PIPE SIZES 77x52 IN. THROUGH 83x57 IN.
- A GALVANIZED TOE PLATE IS AVAILABLE AS AN ACCESSORY. WHEN SPECIFIED IT SHALL BE THE SAME GAGE AS THE APRON.
- THE APRON SHALL BE CONNECTED TO PIPE BY USING EITHER CONNECTING BANDS, RODS, OR STRAPS.
- NOT TO SCALE.

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

ORIGINAL SIGNED BY: MILDRED L. MILLER DATE ORIGINAL SIGNED: MARCH 4, 2005

REVISIONS							
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE
1	09-64		6	06-84			
2	06-68		7	07-92	MSM		
3	04-70		8	11-01	MSM		
4	10-76		9	03-05	MSM		
5	07-78						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
CADD FILE NAME: 608-1\_0305.dgn  
DRAWING DATE: APRIL, 1961

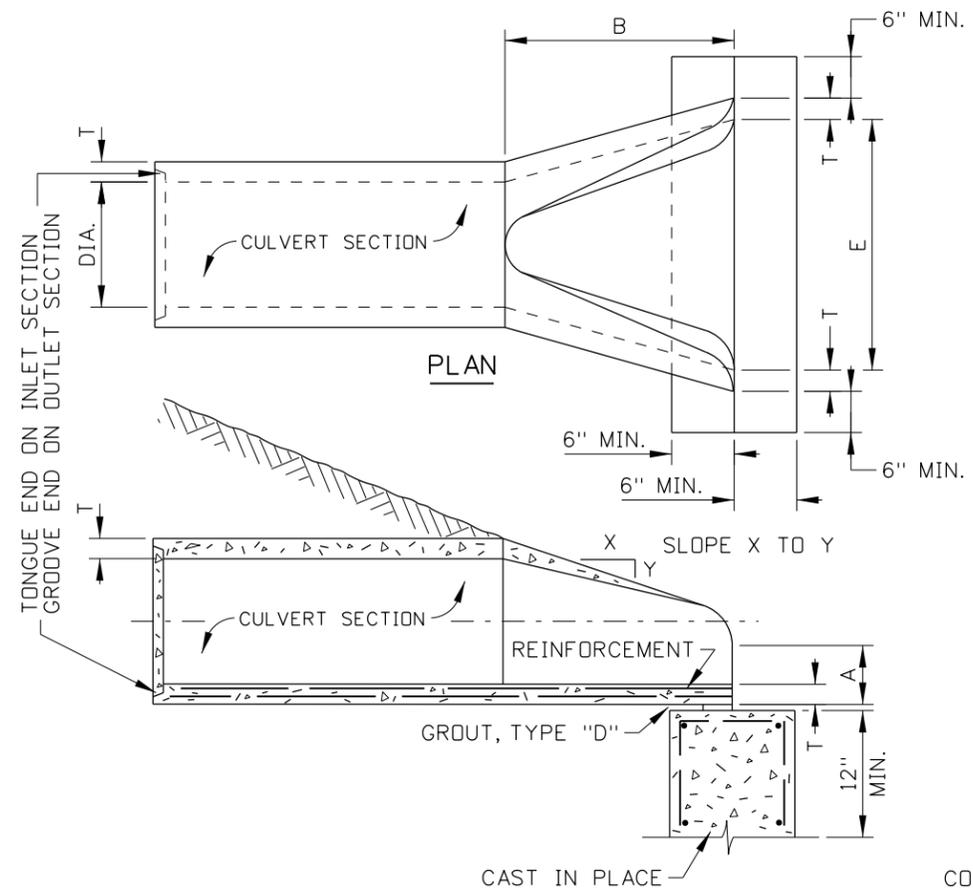
**IDAHO TRANSPORTATION DEPARTMENT**

BOISE IDAHO

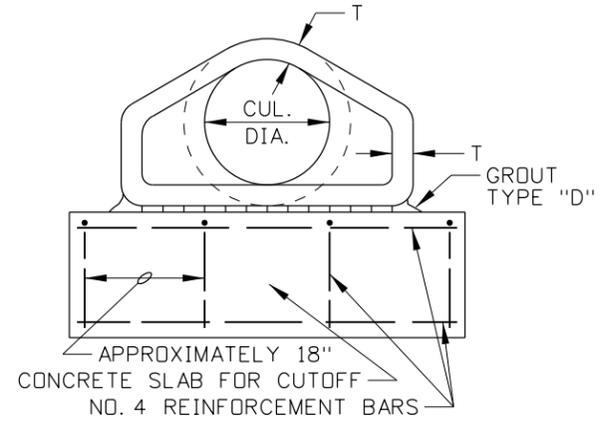
ORIGINAL SIGNED BY: LOREN THOMAS  
ASSISTANT CHIEF ENGINEER (DEVELOPMENT)  
ORIGINAL SIGNED BY: STEVEN HUTCHINSON  
CHIEF ENGINEER

STANDARD DRAWING  
**GALVANIZED STEEL APRONS FOR PIPE CULVERTS**

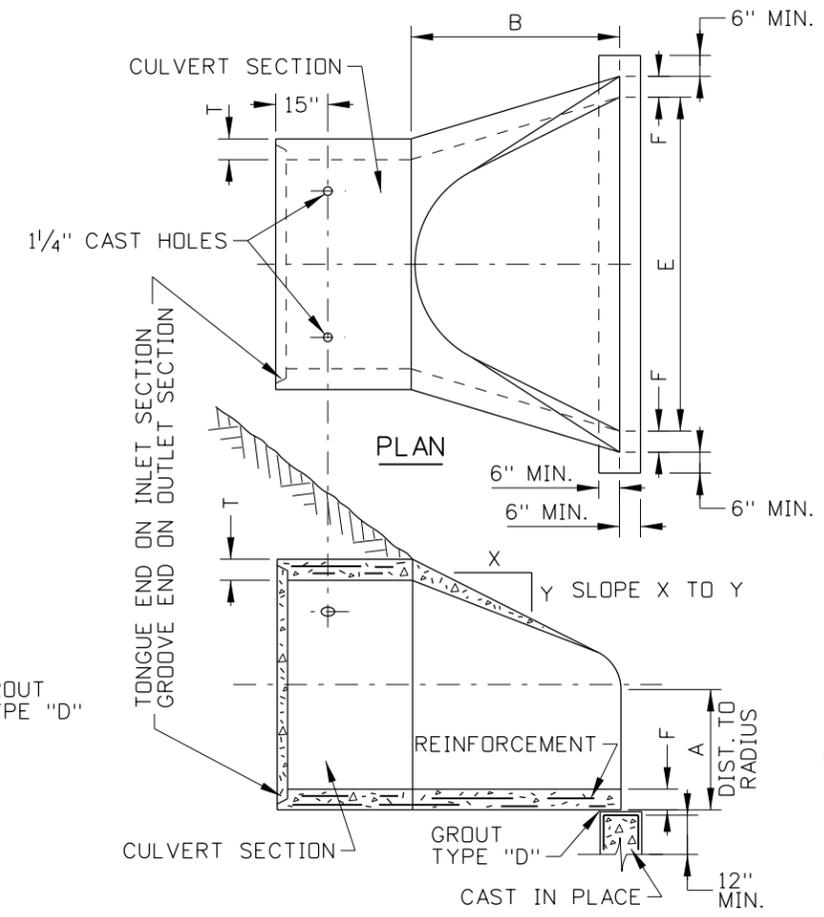
**English**  
STANDARD DRAWING NO.  
**608-1**  
SHEET 1 OF 1



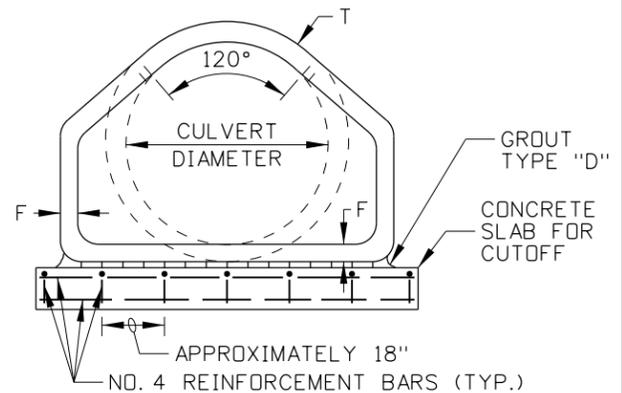
**LONGITUDINAL SECTION**  
(FOR 12" TO 54" DIA. PIPE)



**END VIEW**  
(FOR 12" TO 54" DIA. PIPE)

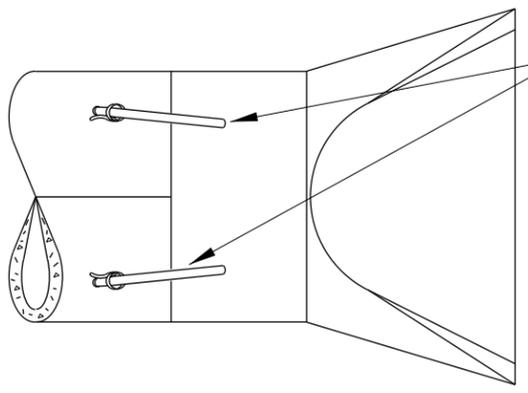


**LONGITUDINAL SECTION**  
(FOR 60" TO 84" DIA. PIPE)



**END VIEW**  
(FOR 60" TO 84" DIA. PIPE)

APRON DIMENSION FOR 12" TO 54" DIA. PIPE					
DIA.	A	B	E	T	SLOPE
12"	4"-5"	1'-10" - 2'-0"	2'-0"	2"	3 TO 1
15"	6"	2'-3"	2'-6"	2 1/4"	3 TO 1
18"	9"-10"	2'-3"	3'-0"	2 1/2"	3 TO 1
21"	9"	3'-0"	3'-5"	2 3/4"	3 TO 1
24"	9 1/2"-10"	3'-7" - 3'-7 1/2"	4'-0"	3"	3 TO 1
27"	10 1/2"	4'-1 1/2"	4'-6"	3 1/4"	3 TO 1
30"	1'-0"	4'-6"	5'-0"	3 1/2"	3 TO 1
36"	1'-3"	5'-3" - 5'-4"	6'-0"	4"	3 TO 1
42"	1'-9" - 1'-10"	5'-3" - 5'-4"	6'-6"	4 1/2"	3 TO 1
48"	2'-0"	6'-0"	7'-0"	5"	3 TO 1
54"	2'-3"	5'-5"	7'-6"	5 1/2"	2 TO 1



**ANCHORING DETAIL**

**60" DIA. PIPE:**  
2 - 1" TIE BOLTS EACH AT 60° TO THE VERTICAL USED TO TIE THE END SECTION TO ADJACENT STRAIGHT SECTION.

**72" DIA. & 84" DIA. PIPE:**  
2 - 1" TIE BOLTS PLACED AS SPECIFIED FOR 60" PIPE ALSO 1 - 1" TIE BOLT IS TO BE PLACED AT THE TOP.

APRON DIMENSION FOR 60" TO 84" DIA. PIPE						
DIA.	A	B	E	F	T	SLOPE
60"	2'-11"	5'-0"	8'-0"	5"	6"	2 TO 1
72"	3'-0"	6'-6"	9'-0"	6"	7"	1.86 TO 1
84"	3'-0"	7'-6 1/2"	10'-0"	6 1/2"	8"	1.5 TO 1

**NOTES**

1. TONGUE AND GROOVE JOINTS ARE SHOWN ON THE DRAWING FOR EXAMPLE ONLY. OTHER JOINTS MAY BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
2. NOT TO SCALE.

REVISIONS							
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE
1	4-66						
2	8-67						
3	2-00	MSM					
4	10-05	MSM					
5	12-12	RDL					

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 608-2\_1212.dgn

DRAWING DATE: MARCH, 1966

**IDAHO TRANSPORTATION DEPARTMENT**

BOISE IDAHO

ORIGINAL SIGNED BY: LOREN THOMAS  
HIGHWAYS PROGRAM OVERSIGHT ENGINEER

ORIGINAL SIGNED BY: TOM COLE  
CHIEF ENGINEER

STANDARD DRAWING

**CONCRETE APRONS FOR PIPE CULVERTS**

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

**English**

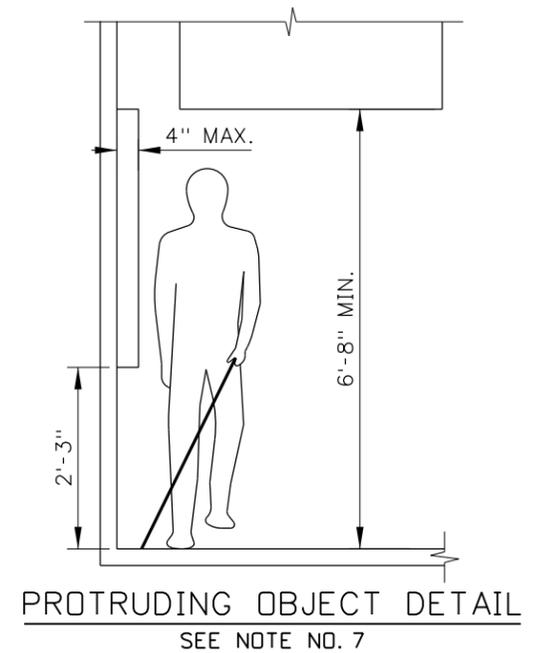
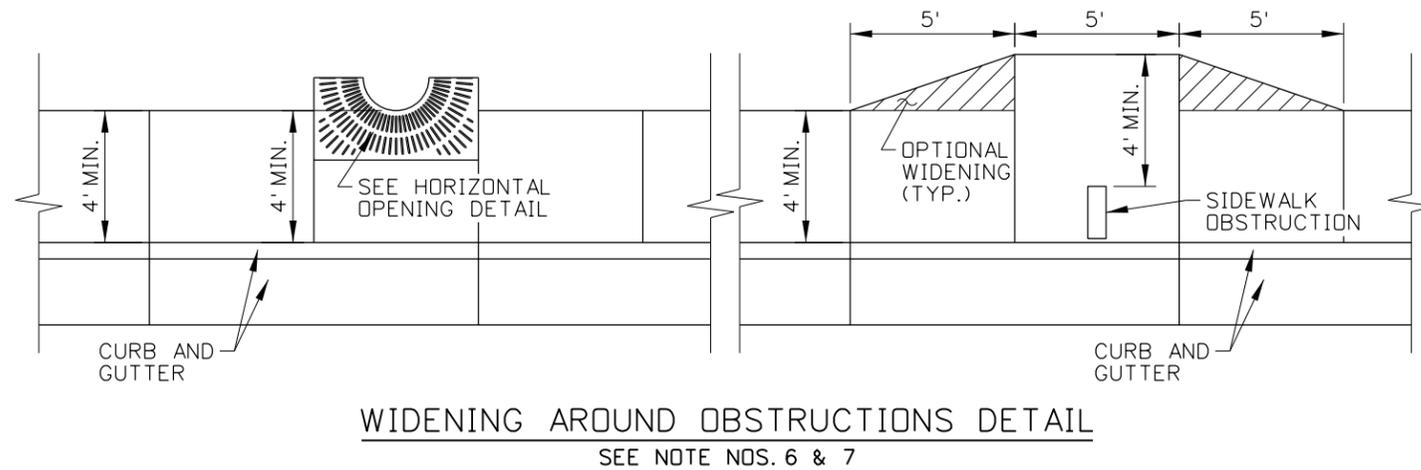
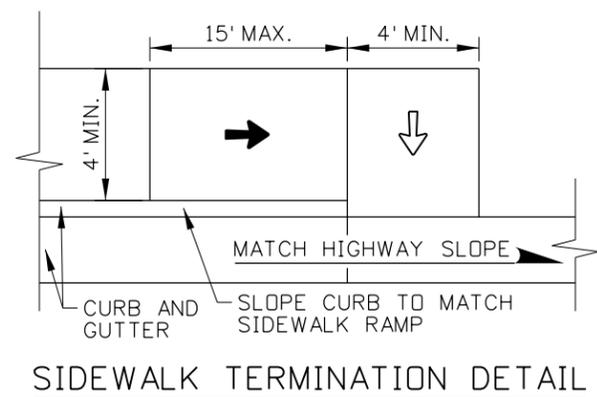
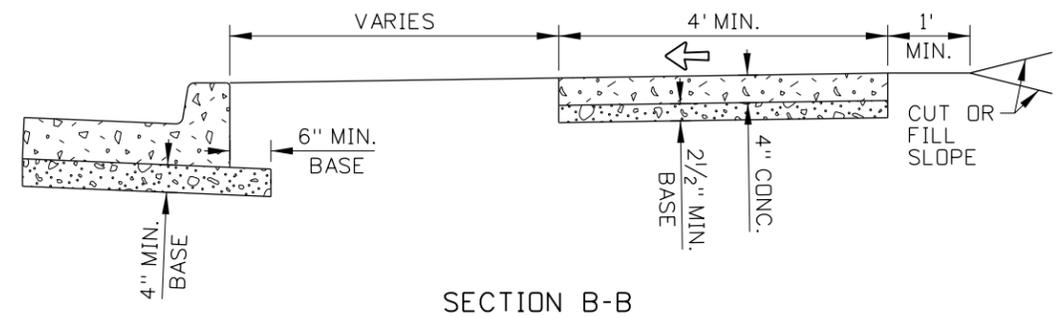
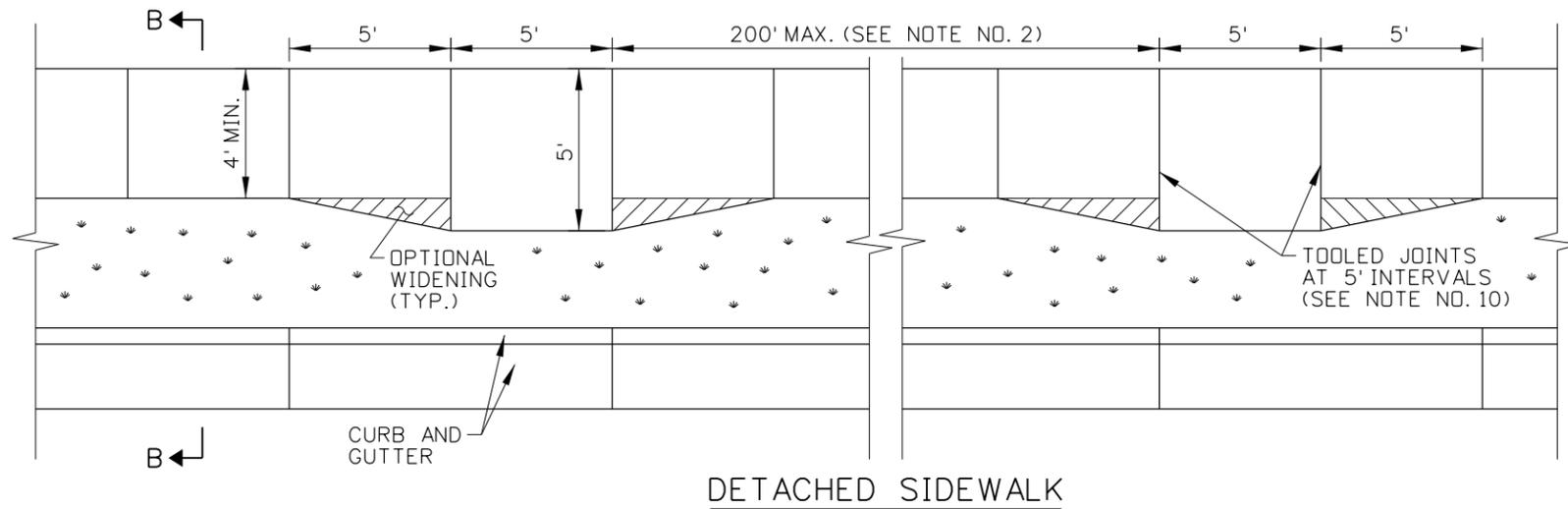
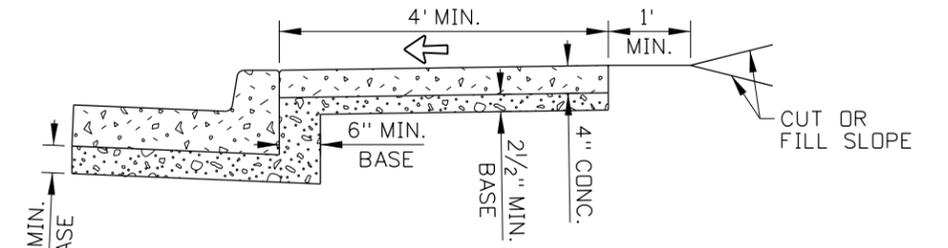
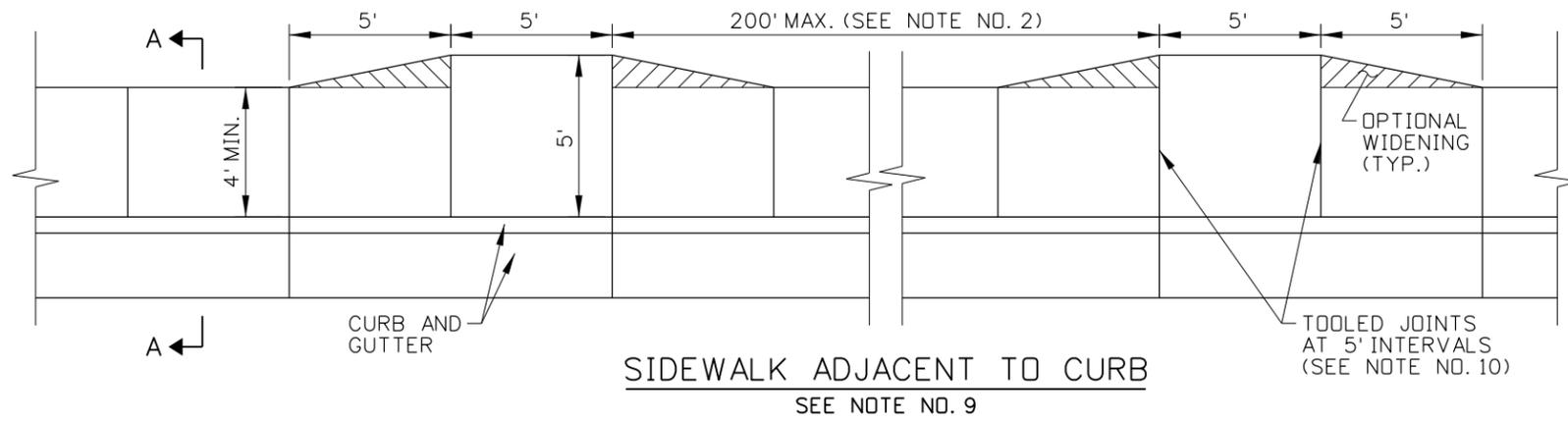
STANDARD DRAWING NO. **608-2**

SHEET 1 OF 1

ORIGINAL SIGNED BY: RYAN D. LANCASTER  
DATE ORIGINAL SIGNED: DECEMBER 17, 2012

**SYMBOL LEGEND**

- ↖ 1.0% TO 2.0% SLOPE
- ↙ 5.0% TO 8.3% RUNNING SLOPE, 2.0% OR FLATTER CROSS SLOPE



REVISIONS							
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
CADD FILE NAME: 614-1\_0615.dgn  
DRAWING DATE: MAY, 2015

**IDAHO TRANSPORTATION DEPARTMENT**



BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN  
DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING  
**SIDEWALKS**  
REQUIRES SHEET 2 OF 2

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

**English**  
STANDARD DRAWING NO.  
**614-1**  
SHEET 1 OF 2

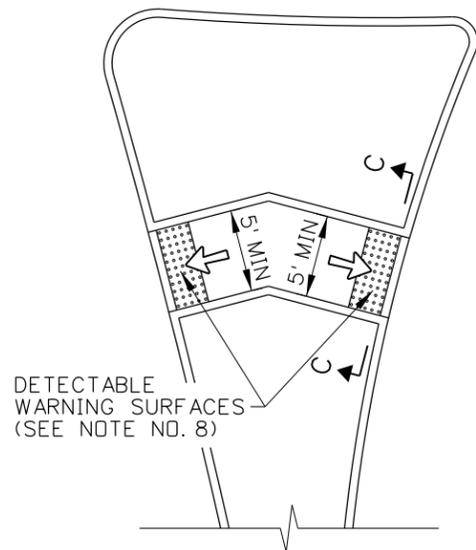
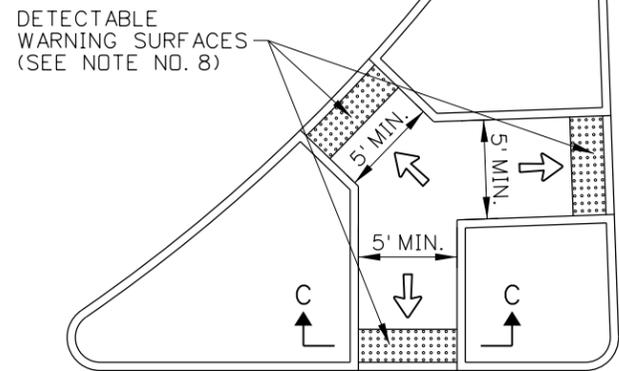
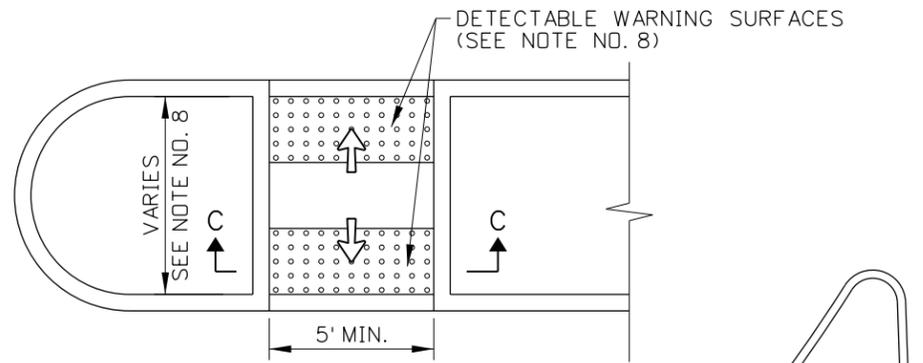
ORIGINAL SIGNED BY:  
RYAN D. LANCASTER  
DATE ORIGINAL SIGNED:  
JUNE 15, 2015

**SYMBOL LEGEND**

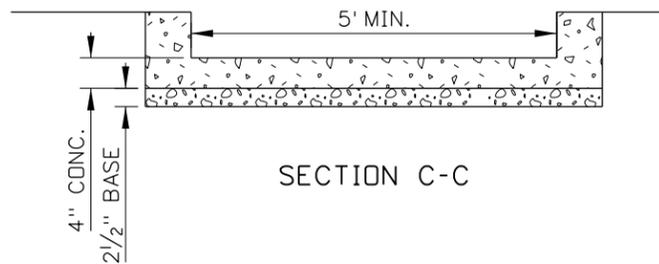
- ↖ 1.0% TO 2.0% SLOPE
- ↙ 5.0% TO 8.3% RUNNING SLOPE,  
2.0% OR FLATTER CROSS SLOPE

**NOTES**

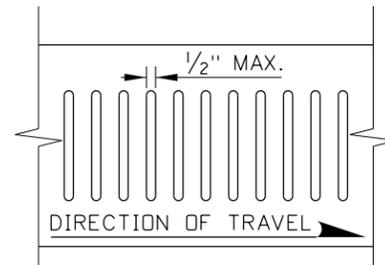
1. SIDEWALKS MAY CONSIST OF A PEDESTRIAN CIRCULATION PATH AND A PEDESTRIAN ACCESS ROUTE. THE PEDESTRIAN CIRCULATION PATH IS A PREPARED SURFACE PROVIDED FOR PEDESTRIAN TRAVEL IN THE PUBLIC RIGHT-OF-WAY. THE PEDESTRIAN ACCESS ROUTE IS A CONTINUOUS AND UNOBSTRUCTED PATH OF TRAVEL PROVIDED FOR PEDESTRIANS WITH DISABILITIES WITHIN OR COINCIDING WITH A PEDESTRIAN CIRCULATION PATH.
2. PROVIDE AT LEAST 4' OF CONTINUOUS CLEAR WIDTH OF PEDESTRIAN ACCESS ROUTE, EXCLUSIVE OF THE CURB WIDTH. WHERE SIDEWALKS ARE WIDER THAN 4', ONLY A PORTION OF THE SIDEWALK IS REQUIRED TO BE PART OF THE PEDESTRIAN ACCESS ROUTE.  
  
PROVIDE A PASSING SPACE AT 200' OR SHORTER INTERVALS WHEN THE CLEAR WIDTH OF THE PEDESTRIAN ACCESS ROUTE IS LESS THAN 5'. ENSURE THAT THE DIMENSIONS OF THE PASSING SPACE ARE AT LEAST 5' BY 5'. INTERSECTING SIDEWALKS, DRIVEWAYS, AND ALLEYS MAY BE USED AS PASSING SPACES.
3. ENSURE THAT THE GRADE OF THE PEDESTRIAN ACCESS ROUTE DOES NOT EXCEED THE GENERAL GRADE ESTABLISHED FOR THE ADJACENT HIGHWAY.
4. ENSURE THAT THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE WITHIN THE SIDEWALK DOES NOT EXCEED TWO PERCENT.
5. VERTICAL SURFACE DISCONTINUITIES MAY OCCASIONALLY OCCUR AT EXPANSION JOINTS, UTILITY COVERS, VAULT FRAMES, AND GRATINGS WITHIN THE SIDEWALK. ENSURE THAT VERTICAL SURFACE DISCONTINUITIES DO NOT EXCEED 1/2". BEVEL VERTICAL SURFACE DISCONTINUITIES BETWEEN 1/4" AND 1/2" WITH A 2:1 SLOPE ACROSS THE ENTIRE VERTICAL SURFACE DISCONTINUITY.
6. ENSURE THAT HORIZONTAL OPENINGS IN GRATINGS AND JOINTS DO NOT PERMIT PASSAGE OF A SPHERE MORE THAN 1/2" IN DIAMETER.
7. OBJECTS PROTRUDING INTO OR OVERHANGING A PEDESTRIAN CIRCULATION PATH MUST NOT REDUCE THE MINIMUM CLEAR WIDTH OF THE PEDESTRIAN ACCESS ROUTE. PROTRUDING OBJECTS INCLUDE STREET FURNITURE, STREET LIGHTS, UTILITY POLES, EQUIPMENT CABINETS, SIGN POSTS AND SIGNS, PARKING METERS, TRASH RECEPTACLES, PUBLIC TELEPHONES, MAILBOXES, NEWSPAPER VENDING MACHINES, BENCHES, TRANSIT SHELTERS, KIOSKS, BICYCLE RACKS, PLANTERS AND PLANTED TREES, AND STREET SCULPTURES.  
  
ENSURE THAT OBJECTS WITH LEADING EDGES BETWEEN 2'-3" AND 6'-8" ABOVE THE FINISH SURFACE DO NOT PROTRUDE MORE THAN 4" HORIZONTALLY INTO THE PEDESTRIAN CIRCULATION PATH.
8. PROVIDE DETECTABLE WARNING SURFACES ON PEDESTRIAN REFUGE ISLANDS WITH CURB RAMPS OR WHEN CUT-THROUGH AT STREET LEVEL AND REFUGE ISLAND WIDTHS ARE GREATER THAN SIX FEET IN THE DIRECTION OF PEDESTRIAN TRAVEL. DO NOT INSTALL DETECTABLE WARNING SURFACES AT PEDESTRIAN REFUGE ISLANDS THAT ARE CUT-THROUGH AT STREET LEVEL AND ARE LESS THAN SIX FEET IN WIDTH IN THE DIRECTION OF PEDESTRIAN TRAVEL. SEE STANDARD DRAWING 614-3 FOR DETECTABLE WARNING SURFACE DETAILS.
9. USE A BOND PREVENTATIVE BETWEEN THE SIDEWALK AND CURB WHEN CONSTRUCTED SEPARATELY AND PLACED ADJACENT TO EACH OTHER.
10. ALIGN CURB AND SIDEWALK JOINTS. CONSTRUCT JOINTS AT 5' INTERVALS THAT ARE APPROXIMATELY 1/8" WIDE AND 3/4" IN DEPTH. CONSTRUCT A LONGITUDINAL JOINT WHEN THE SIDEWALK IS 8' WIDE OR WIDER. INSTALL A PREFORMED EXPANSION JOINT FILLER EVERY 40'.
11. DRAWING NOT TO SCALE.



**PEDESTRIAN REFUGE ISLAND DETAILS**

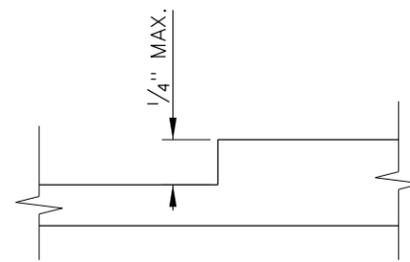


**SECTION C-C**

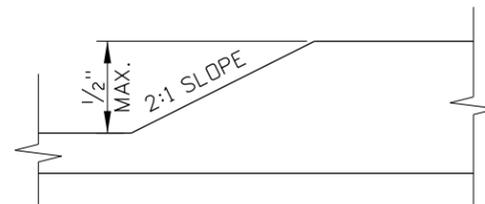


**HORIZONTAL OPENING DETAIL**

SEE NOTE NO. 6



**VERTICAL DISCONTINUITY OF 1/4" OR LESS**



**VERTICAL DISCONTINUITY BETWEEN 1/4" AND 1/2"**

**VERTICAL SURFACE DISCONTINUITY DETAIL**

SEE NOTE NO. 5

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME: 614-1\_0615.dgn  
 DRAWING DATE: MAY, 2015

**IDAHO TRANSPORTATION DEPARTMENT**



BOISE IDAHO

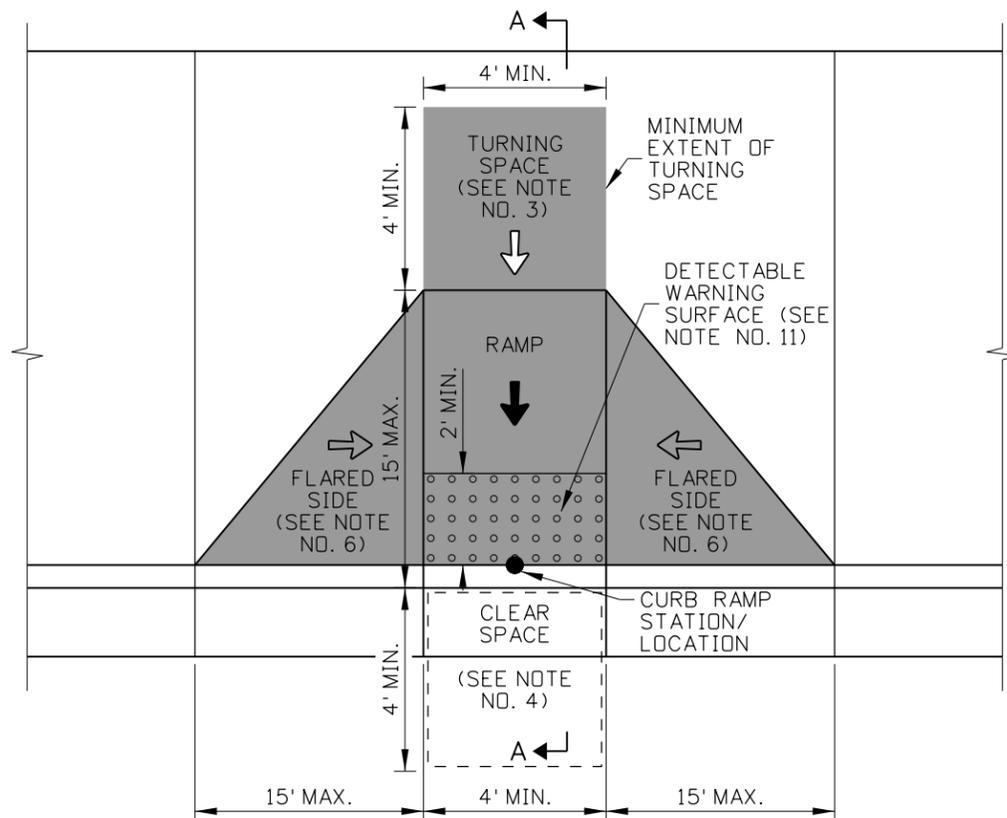
ORIGINAL SIGNED BY: KEVIN SABLAN  
 DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING  
**SIDEWALKS**  
 REQUIRES SHEET 1 OF 2

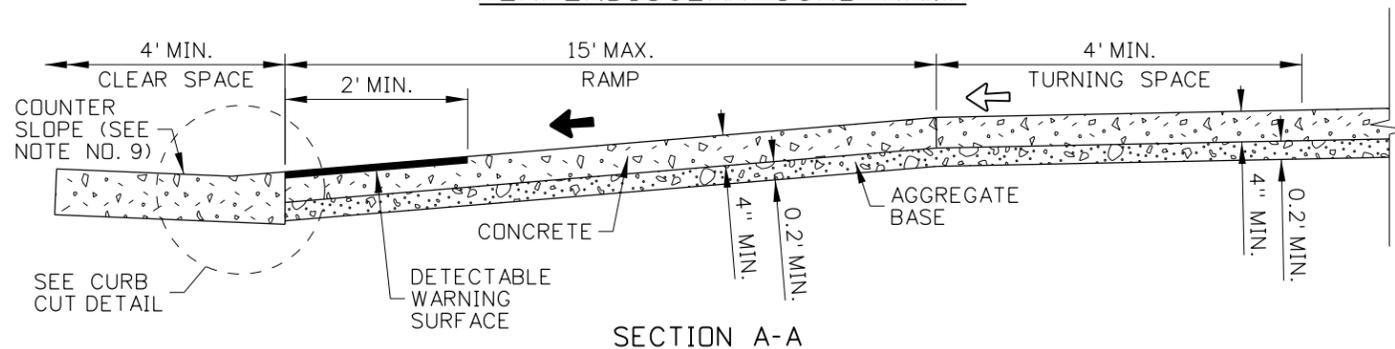
ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

**English**  
 STANDARD DRAWING NO.  
**614-1**  
 SHEET 2 OF 2

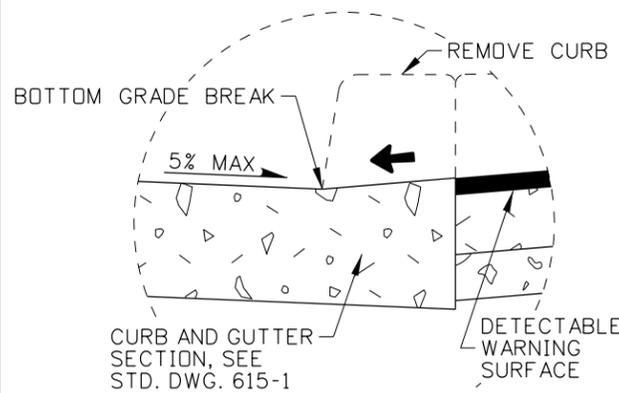
ORIGINAL SIGNED BY:  
 RYAN D. LANCASTER  
 DATE ORIGINAL SIGNED:  
 JUNE 15, 2015



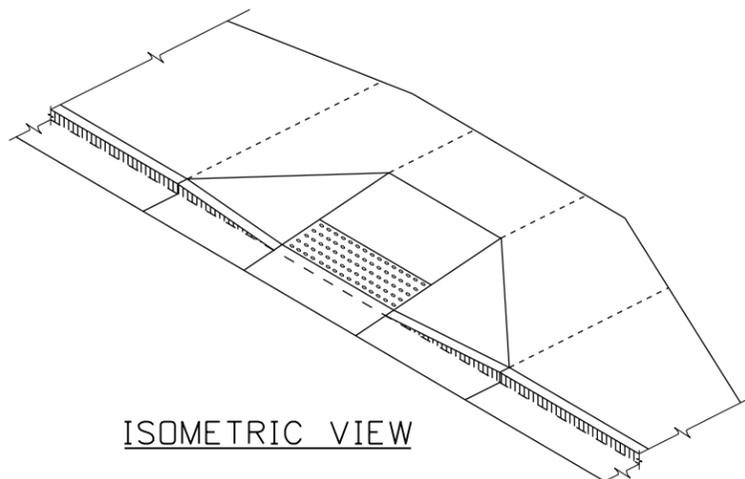
PERPENDICULAR CURB RAMP



SECTION A-A



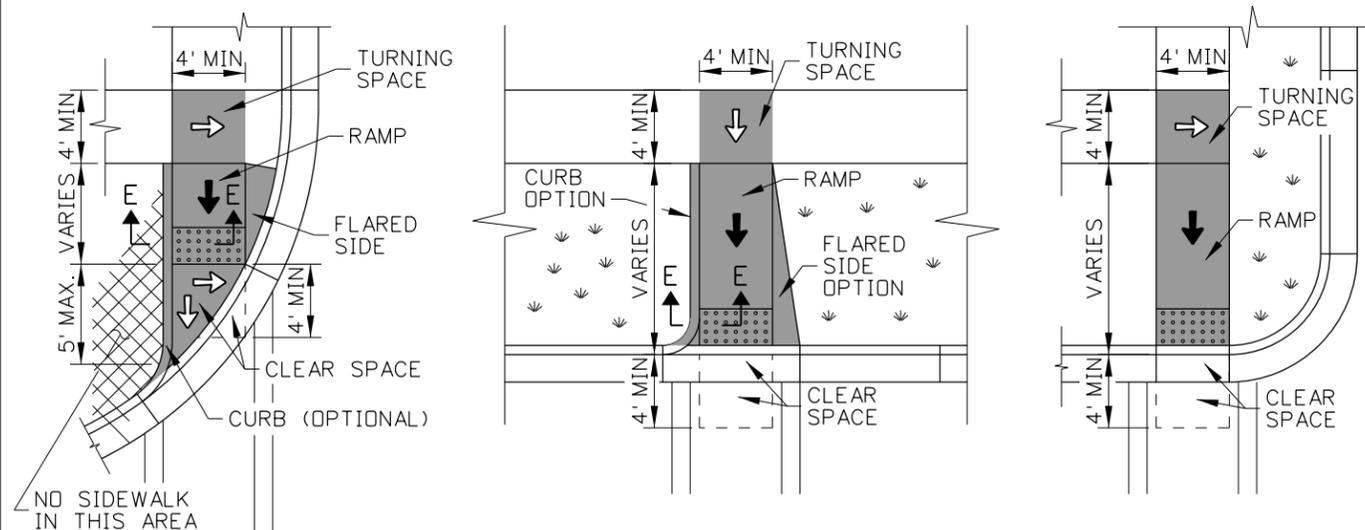
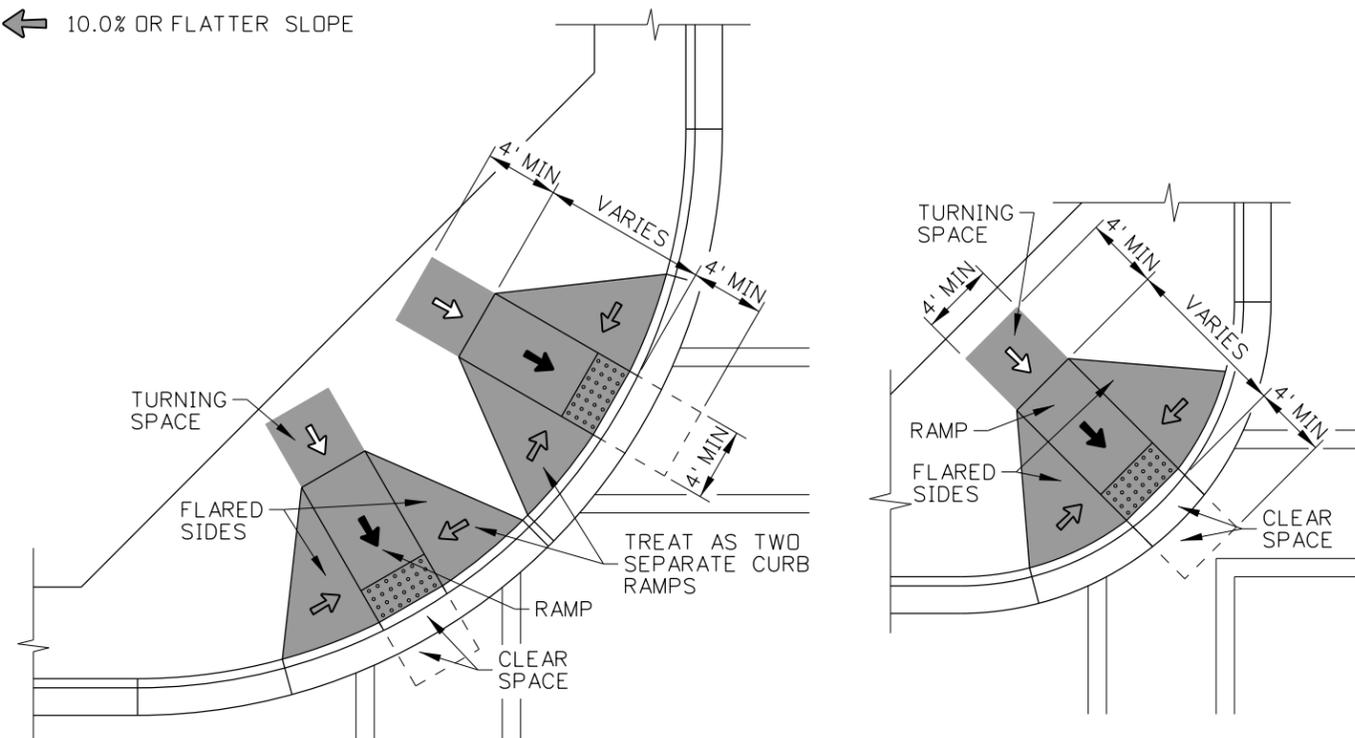
CURB CUT DETAIL



ISOMETRIC VIEW

SYMBOL LEGEND

- ← 1.0% TO 2.0% SLOPE
- ↙ 5.0% TO 8.3% RUNNING SLOPE, 2.0% OR FLATTER CROSS SLOPE
- ↘ 10.0% OR FLATTER SLOPE



EXAMPLE APPLICATIONS

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

ORIGINAL SIGNED BY: RYAN D. LANCASTER DATE: JUNE 15, 2015

REVISIONS							
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE
1	09-93	MSM	6	07-03	MSM	11	07-10
2	12-95	MSM	7	12-04	MSM	12	09-11
3	06-98	MSM	8	06-05	MSM	13	05-15
4	08-01	MSM	9	05-06	MSM		
5	10-02	MSM	10	05-07	MSM		

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME: 614-3\_0615.dgn  
 DRAWING DATE: JUNE, 1990

IDAHO TRANSPORTATION DEPARTMENT



BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN  
 DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING

CURB RAMPS

REQUIRES SHEETS 2 OF 4, 3 OF 4, & 4 OF 4

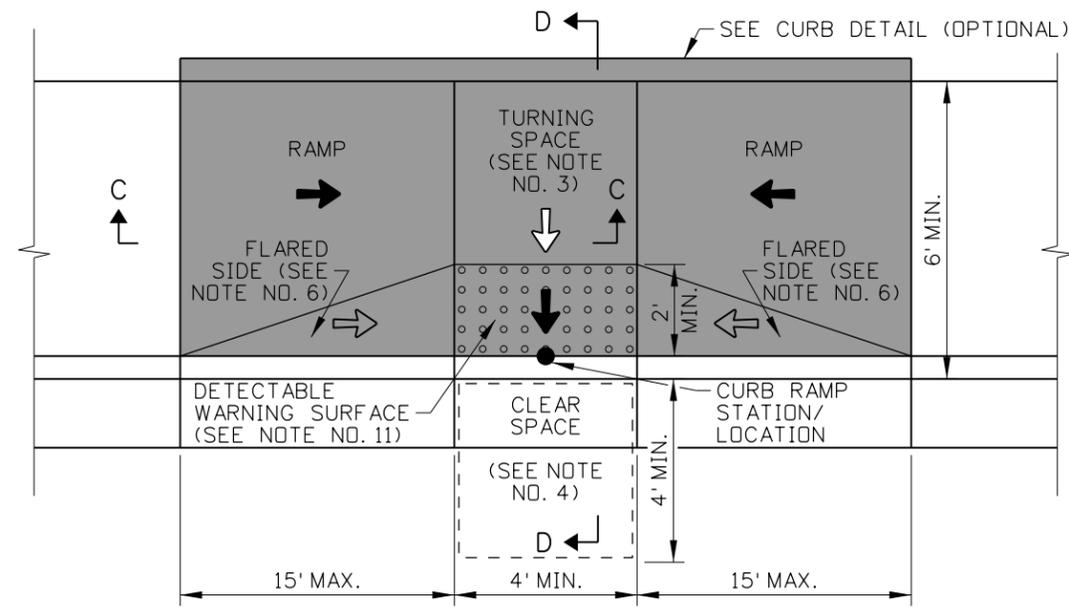
English

STANDARD DRAWING NO.

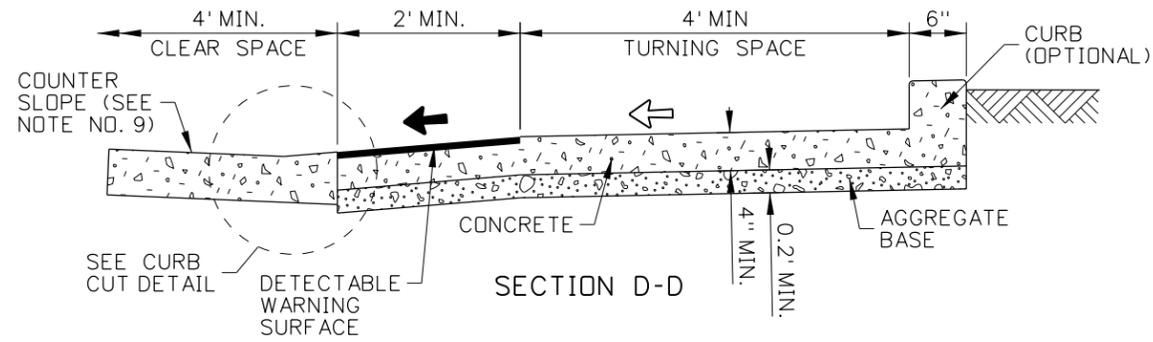
614-3

SHEET 1 OF 4

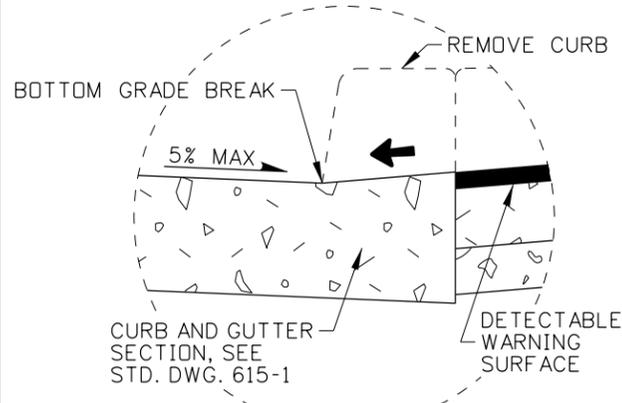




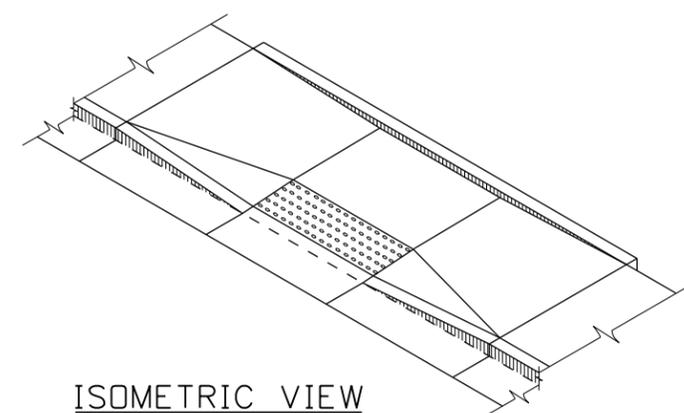
COMBINATION CURB RAMP



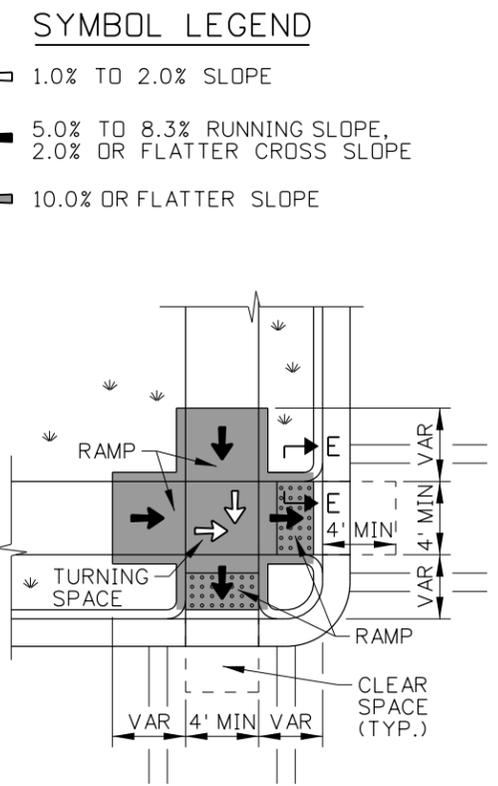
SECTION D-D



CURB CUT DETAIL



ISOMETRIC VIEW



EXAMPLE APPLICATIONS

REVISIONS							
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE
1	09-93	MSM	6	07-03	MSM	11	07-10
2	12-95	MSM	7	12-04	MSM	12	09-11
3	06-98	MSM	8	06-05	MSM	13	05-15
4	08-01	MSM	9	05-06	MSM		
5	10-02	MSM	10	05-07	MSM		

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME: 614-3\_0615.dgn  
 DRAWING DATE: JUNE, 1990

**IDAHO TRANSPORTATION DEPARTMENT**

BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN  
 DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING  
**CURB RAMPS**  
 REQUIRES SHEETS 1 OF 4, 2 OF 4, & 4 OF 4

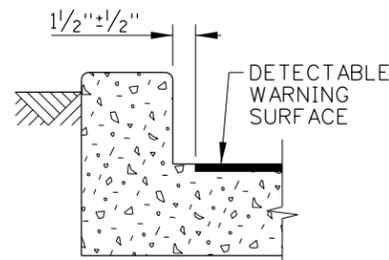
ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

**English**  
 STANDARD DRAWING NO.  
**614-3**  
 SHEET 3 OF 4

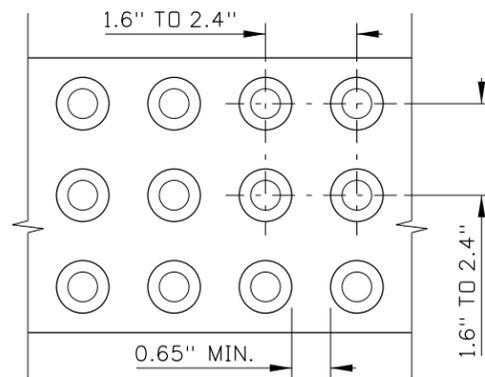
ORIGINAL SIGNED BY:  
 RYAN D. LANCASTER  
 DATE ORIGINAL SIGNED:  
 JUNE 15, 2015

**SYMBOL LEGEND**

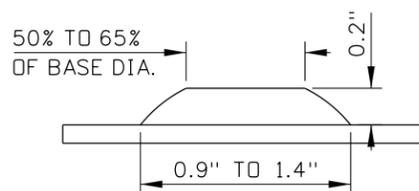
- ← 1.0% TO 2.0% SLOPE
- ← 5.0% TO 8.3% RUNNING SLOPE, 2.0% OR FLATTER CROSS SLOPE
- ← 10.0% OR FLATTER SLOPE



SECTION E-E

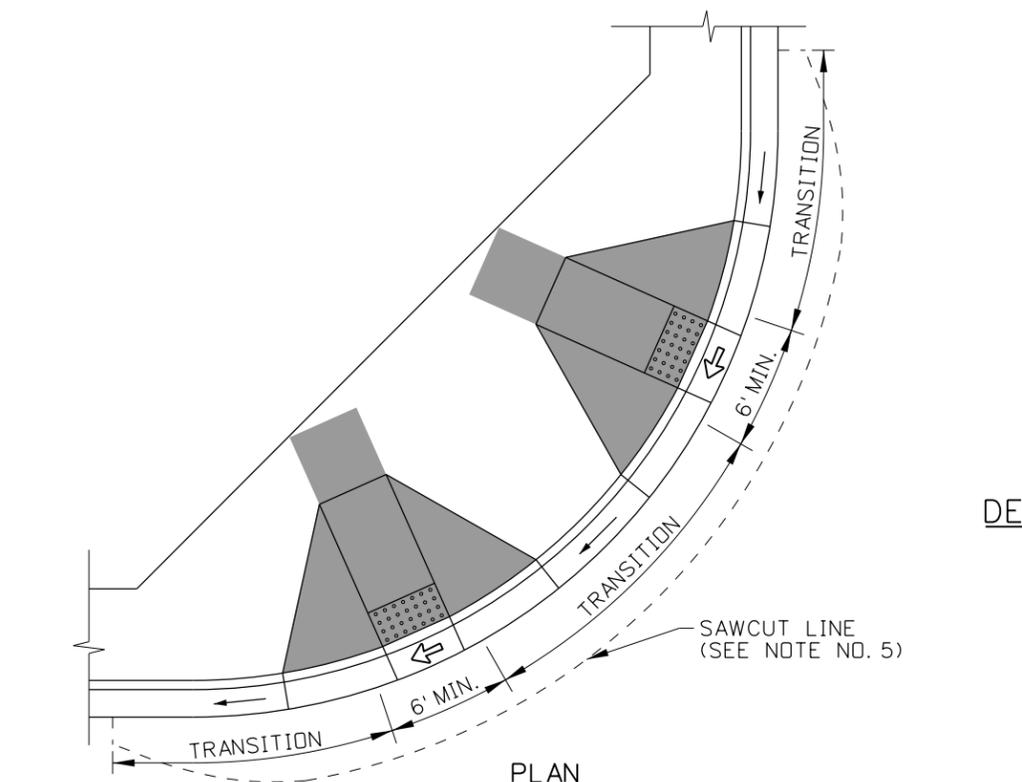


DOME SPACING

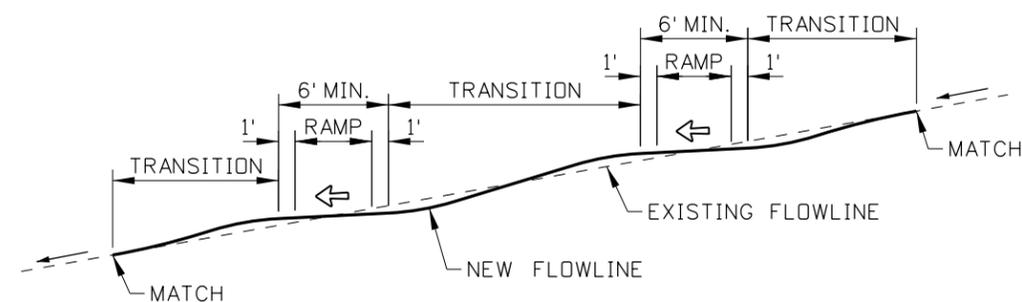


DOME SIZE

**DETECTABLE WARNING SURFACE DETAILS**  
SEE NOTE NO. 11



PLAN



PROFILE

**FLOWLINE PROFILE DETAIL**  
SEE NOTE NO. 5

**NOTES**

1. EXTENTS OF CURB RAMP PAY ITEMS ARE SHOWN IN GRAY SHADING.
2. CURB RAMP CAN BE PERPENDICULAR, PARALLEL, OR A COMBINATION OF PARALLEL AND PERPENDICULAR RAMP. EXAMPLE APPLICATIONS OF EACH ARE SHOWN ON SHEETS 1, 2, AND 3.  
PERPENDICULAR CURB RAMP: PERPENDICULAR CURB RAMP HAS A RAMP THAT CUTS THROUGH THE CURB AT RIGHT ANGLES OR MEETS THE GUTTER GRADE BREAK AT RIGHT ANGLES WHEN THE CURB IS CURVED.  
PARALLEL CURB RAMP: PARALLEL CURB RAMP HAS A RAMP OR RAMPS IN-LINE WITH THE DIRECTION OF SIDEWALK TRAVEL AND LOWER THE SIDEWALK TO A LEVEL TURNING SPACE WHERE A TURN IS MADE TO ENTER THE PEDESTRIAN STREET CROSSING.  
COMBINATION CURB RAMP: COMBINATION CURB RAMP HAS FEATURES FROM PERPENDICULAR AND PARALLEL CURB RAMP.
3. PROVIDE A TURNING SPACE WITH A 2.0% OR FLATTER SLOPE IN EACH DIRECTION. TURNING SPACES MAY OVERLAP WITH OTHER TURNING SPACES AND CLEAR SPACES.  
PERPENDICULAR CURB RAMP: PROVIDE A 4' BY 5' MINIMUM TURNING SPACE WHEN THE TURNING SPACE IS CONSTRAINED AT THE BACK-OF-SIDEWALK.  
PARALLEL CURB RAMP: PROVIDE A 4' BY 5' TURNING SPACE WHEN THE TURNING SPACE IS CONSTRAINED ON TWO OR MORE SIDES. ENSURE THAT THE 5' DIMENSION IS PROVIDED IN THE DIRECTION OF THE PEDESTRIAN STREET CROSSING.
4. PROVIDE A CLEAR SPACE BEYOND THE BOTTOM OF THE GRADE BREAK THAT IS WITHIN THE WIDTH OF THE PEDESTRIAN STREET CROSSING AND WHOLLY OUTSIDE THE PARALLEL VEHICLE TRAFFIC LANE.
5. CROSS SLOPE IS THE SLOPE PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL. ENSURE THAT THE CROSS SLOPE OF THE RAMP AND TURNING SPACE DOES NOT EXCEED TWO PERCENT. AT PEDESTRIAN STREET CROSSINGS WITHOUT YIELD OR STOP CONTROL AND AT MIDBLOCK PEDESTRIAN STREET CROSSINGS, THE CROSS SLOPE MAY MATCH THE STREET OR HIGHWAY GRADE. FLATTEN THE GUTTER FLOWLINE THROUGH CURB RAMP TO TWO PERCENT OR FLATTER WHEN NEEDED. WHEN THE PAVEMENT IS SAWCUT TO FLATTEN THE FLOWLINE, VARY THE WIDTH OF THE SAWCUT SO THAT THE PAVEMENT PATCH SMOOTHLY MATCHES THE EXISTING PAVEMENT.
6. PROVIDE FLARED SIDES ON PERPENDICULAR CURB RAMP, OR COMBINATION CURB RAMP WHERE A PEDESTRIAN CIRCULATION PATH CROSSES THE CURB RAMP. THE FLARED SIDES ARE PART OF THE PEDESTRIAN CIRCULATION PATH, BUT ARE NOT PART OF THE PEDESTRIAN ACCESS ROUTE. THE SLOPE OF THE FLARED SIDES IS MEASURED PARALLEL TO THE CURB LINE. FLARED SIDES ARE NOT NEEDED OR MAY BE STEEPER WHEN THE PEDESTRIAN CIRCULATION PATH DOES NOT CROSS THE CURB RAMP.
7. THE PEDESTRIAN CIRCULATION PATH IS A PREPARED SURFACE PROVIDED FOR PEDESTRIAN TRAVEL IN THE PUBLIC RIGHT-OF-WAY. THE PEDESTRIAN ACCESS ROUTE IS A CONTINUOUS AND UNOBSTRUCTED PATH OF TRAVEL PROVIDED FOR PEDESTRIANS WITH DISABILITIES WITHIN OR COINCIDING WITH A PEDESTRIAN CIRCULATION PATH.
8. ENSURE THAT GRADE BREAKS ARE PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN AND ARE FLUSH. DO NOT CREATE GRADE BREAKS ON THE SURFACE OF RAMP RUNS AND TURNING SPACES.
9. ENSURE THAT THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF CURB RAMP RUNS DOES NOT EXCEED FIVE PERCENT.
10. WHERE PRACTICAL, PLACE UTILITY COVERS, VAULT FRAMES, AND GRATINGS OUTSIDE RAMP RUNS, TURNING SPACES, OR GUTTER AREAS. LOCATE CATCH BASINS AND INLETS OUTSIDE OF RAMP RUNS.
11. DETECTABLE WARNING SURFACES CONSIST OF TRUNCATED DOMES ALIGNED IN A SQUARE OR RADIAL GRID PATTERN. PROVIDE DETECTABLE WARNING SURFACES THAT CONTRAST VISUALLY WITH ADJACENT GUTTER, HIGHWAY, OR PEDESTRIAN ACCESS ROUTE SURFACE, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. ENSURE THAT THE DETECTABLE WARNING SURFACE EXTENDS THE FULL WIDTH OF THE RAMP RUN (EXCLUDING FLARED SIDES) OR TURNING SPACE.  
PERPENDICULAR AND COMBINATION CURB RAMP: WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE IN FRONT OF THE BACK OF CURB, PLACE THE DETECTABLE WARNING SURFACE AT THE BACK OF CURB.  
WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE BEHIND THE BACK OF CURB, PLACE THE DETECTABLE WARNING SURFACE ON THE RAMP RUN WITHIN ONE DOME SPACING OF THE BOTTOM GRADE BREAK AND WITHIN 5' OF THE BACK OF CURB.  
PARALLEL CURB RAMP: PLACE DETECTABLE WARNING SURFACE ON THE TURNING SPACE AT THE BACK OF CURB.
12. USE A BOND PREVENTATIVE BETWEEN THE CURB RAMP OR SIDEWALK AND CURB WHEN CONSTRUCTED SEPARATELY AND PLACED ADJACENT TO EACH OTHER.
13. ALIGN ALTERNATING CURB AND SIDEWALK JOINTS. CONSTRUCT JOINTS APPROXIMATELY 1/8" WIDE AND 3/4" IN DEPTH.
14. DRAWING NOT TO SCALE.

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

ORIGINAL SIGNED BY: RYAN D. LANCASTER DATE ORIGINAL SIGNED: JUNE 15, 2015

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	09-93	MSM	6	07-03	MSM	11	07-10	JAW
2	12-95	MSM	7	12-04	MSM	12	09-11	TEM
3	06-98	MSM	8	06-05	MSM	13	05-15	RDL
4	08-01	MSM	9	05-06	MSM			
5	10-02	MSM	10	05-07	MSM			

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
CADD FILE NAME: 614-3\_0615a.dgn  
DRAWING DATE: JUNE, 1990

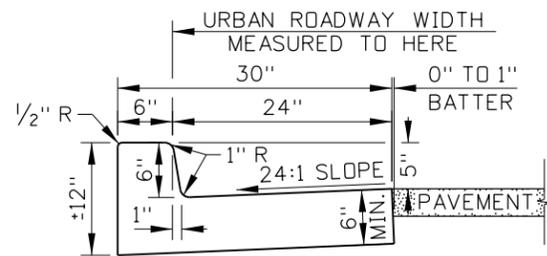
**IDAHO TRANSPORTATION DEPARTMENT**

BOISE IDAHO

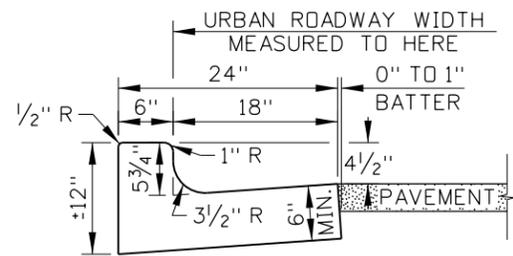
ORIGINAL SIGNED BY: KEVIN SABLAN  
DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING  
**CURB RAMPS**  
REQUIRES SHEETS 1 OF 4, 2 OF 4, & 3 OF 4

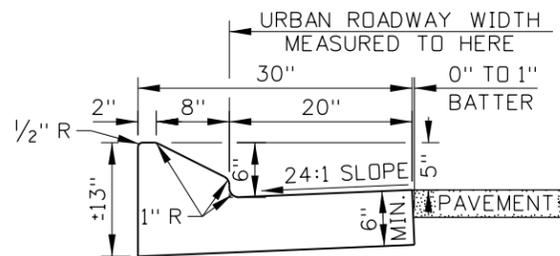
**English**  
STANDARD DRAWING NO.  
**614-3**  
SHEET 4 OF 4



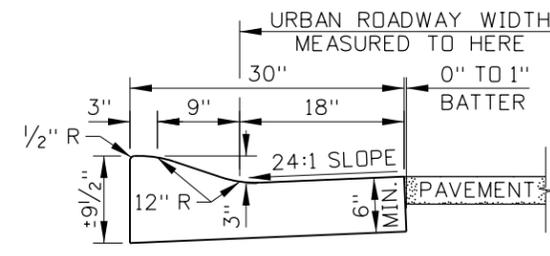
CURB AND GUTTER TYPE 1



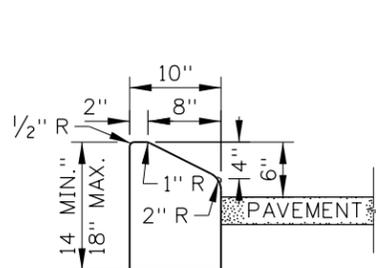
CURB AND GUTTER TYPE 2  
(SEE NOTE NO. 4)



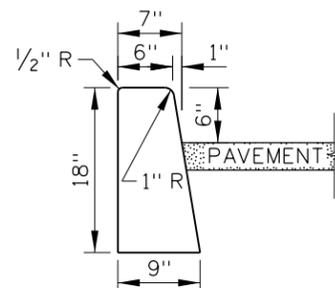
CURB AND GUTTER TYPE 3



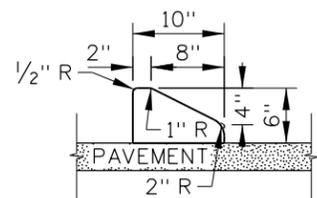
CURB AND GUTTER TYPE 4



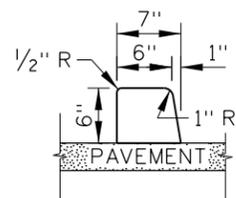
CURB TYPE 1



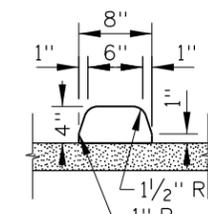
CURB TYPE 2



CURB TYPE 3  
(SEE NOTE NO. 3)



CURB TYPE 4  
(SEE NOTE NO. 3)



CURB TYPE 5  
(SEE NOTE NO. 3)

NOTES

1. TRANSITION BETWEEN DIFFERENT TYPES OVER 10 FEET.
2. PROVIDE 4 INCHES OF AGGREGATE BASE UNDER CURB AND GUTTER, CURB, OR GUTTER UNLESS THE CURB IS PLACED ON PAVEMENT.
3. PORTLAND CEMENT CONCRETE CURB OR TRAFFIC SEPARATOR ON ASPHALT CONCRETE PAVEMENT:

PROVIDE A KEY IN THE PAVEMENT AT THE CENTERLINE OF THE CURB OR TRAFFIC SEPARATOR. SEE THE KEY DETAIL.

CONCRETE CURBS OR TRAFFIC SEPARATORS MAY BE PINNED TO THE PAVEMENT STRUCTURE IN LIEU OF THE KEY. DRILL THE PAVEMENT AND PLACE PINS BEFORE THE CURB OR TRAFFIC SEPARATOR IS CONSTRUCTED. SEE THE PIN DETAIL.

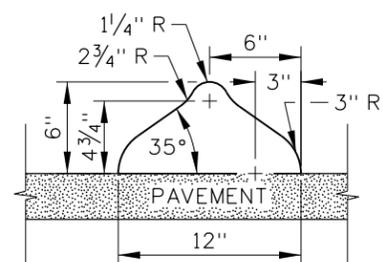
PORTLAND CEMENT CONCRETE CURB OR TRAFFIC SEPARATOR ON PORTLAND CEMENT CONCRETE PAVEMENT:

USE AN EPOXY BONDING AGENT. NO KEY IS NEEDED.

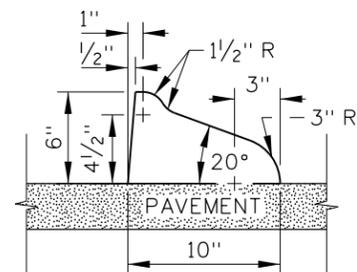
ASPHALT CONCRETE CURB OR TRAFFIC SEPARATOR ON ASPHALT CONCRETE PAVEMENT:

NO KEY IS NEEDED. ENSURE THAT THE CURB IS BONDED TO THE PAVEMENT.

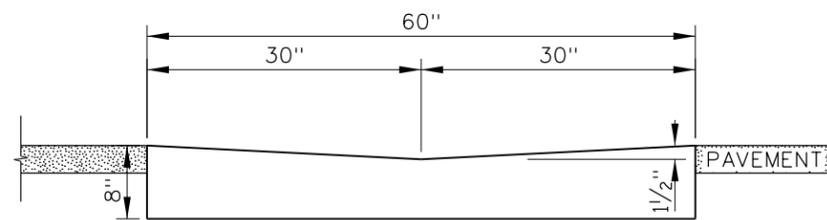
4. ENSURE THAT THE GUTTER SLOPE DOES NOT EXCEED 5 PERCENT AT CURB RAMPS.
5. TAPER THE LAST 6 FEET OF CURB AND GUTTER TYPES 1, 2, 3, AND 4 AND CURB TYPES 1 AND 2 DOWN TO A 1 INCH HEIGHT. TAPER CURB TYPES 3, 4, AND 5 AND TRAFFIC SEPARATORS TYPES 1 AND 2 DOWN TO A 1 INCH HEIGHT AT A 1:1 SLOPE.
6. DRAWING NOT TO SCALE.



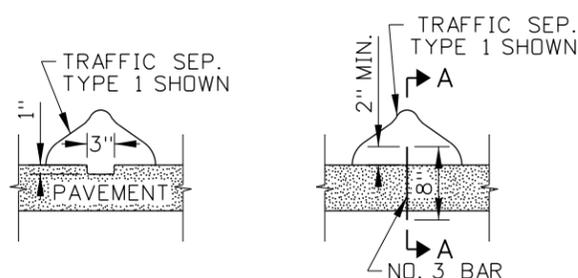
TRAFFIC SEPARATOR TYPE 1  
(SEE NOTE NO. 3)



TRAFFIC SEPARATOR TYPE 2  
(SEE NOTE NO. 3)

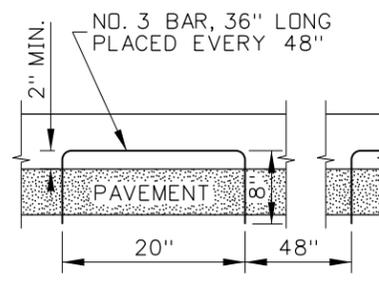


GUTTER TYPE 1

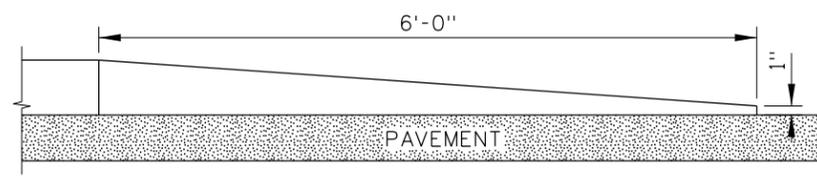


KEY DETAIL  
(SEE NOTE NO. 3)

PIN DETAIL  
(SEE NOTE NO. 3)



SECTION A-A



CURB TERMINUS DETAIL  
(SEE NOTE NO. 5)

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

ORIGINAL SIGNED BY: RYAN D. LANCASTER DATE ORIGINAL SIGNED: AUGUST 22, 2018

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	02-76		6	12-04	MSM	11	07-18	RDL
2	12-90	GB	7	06-05	MSM			
3	09-93	MSM	8	07-10	JAW			
4	12-94	MSM	9	11-14	RDL			
5	12-01	MSM	10	06-17	RDL			

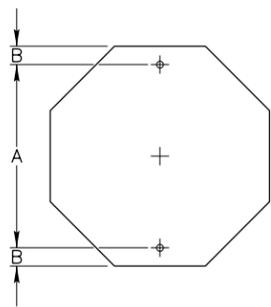
SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
CADD FILE NAME: 615-1\_0818.dgn  
DRAWING DATE: APRIL, 1961

IDAHO TRANSPORTATION DEPARTMENT  
BOISE IDAHO

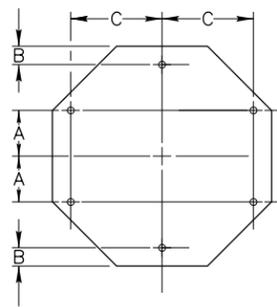
ORIGINAL SIGNED BY: KEVIN SABLAN  
DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING  
CURB AND GUTTER

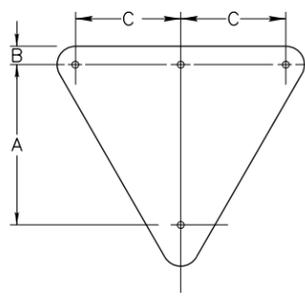
English  
STANDARD DRAWING NO. 615-1  
SHEET 1 OF 1



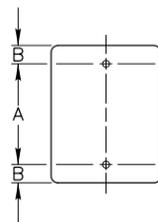
SIGN SIZE	A	B
30"X30"	24"	3"



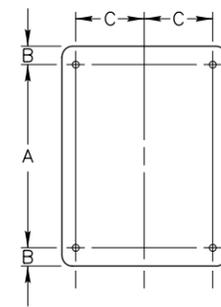
SIGN SIZE	A	B	C
36"X36"	8"	3"	12"
48"X48"	10"	—	20"



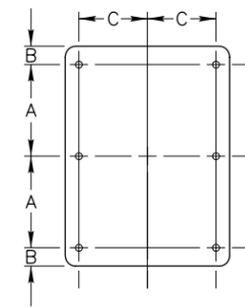
SIGN SIZE	A	B	C
30"X30"	18"	3"	—
36"X36"	23"	3"	—
48"X48"	25"	3"	17"
60"X60"	35"	4"	23"



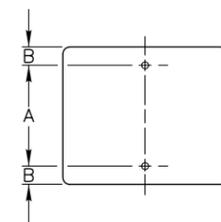
SIGN SIZE	A	B
6"X12"	9"	1 1/2"
6"X18"	15"	1 1/2"
9"X12"	9"	1 1/2"
12"X18"	15"	1 1/2"
12"X30"	24"	3"
12"X36"	32"	2"
18"X24"	18"	3"
24"X30"	24"	3"
24"X36"	30"	3"
30"X36"	30"	3"



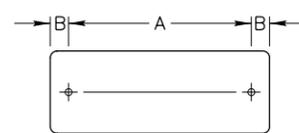
SIGN SIZE	A	B	C
36"X36"	30"	3"	15"
36"X48"	42"	3"	15"
48"X30"	24"	3"	15"
48"X36"	30"	3"	15"
60"X36"	30"	3"	21"



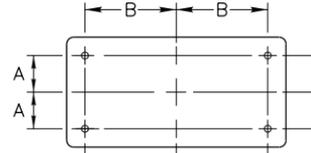
SIGN SIZE	A	B	C
48"X60"	27"	3"	15"



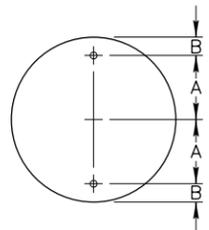
SIGN SIZE	A	B
12"X6"	3"	1 1/2"
18"X9"	6"	1 1/2"
18"X12"	9"	1 1/2"
18"X18"	15"	1 1/2"
21"X15"	12"	1 1/2"
24"X6"	3"	1 1/2"
24"X10"	7"	1 1/2"
24"X12"	9"	1 1/2"
24"X18"	15"	1 1/2"
24"X24"	18"	3"
30"X18"	12"	3"
30"X24"	18"	3"
30"X30"	24"	3"
36"X24"	18"	3"
36"X30"	24"	3"
42"X24"	18"	3"
42"X30"	24"	3"
42"X36"	30"	3"



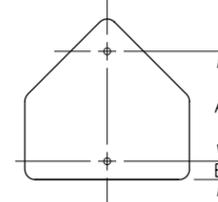
SIGN SIZE	A	B
30"X15"	24"	3"
36"X12"	30"	3"
36"X18"	24"	6"
48"X12"	42"	3"
48"X18"	42"	3"
54"X18"	48"	3"



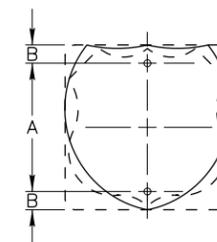
SIGN SIZE	A	B
48"X24"	9"	20"



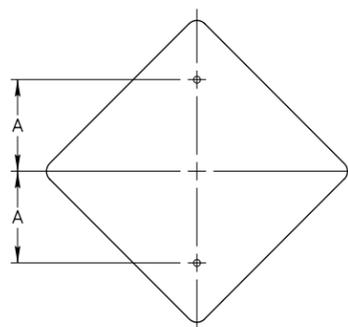
SIGN SIZE	A	B
36"	15"	3"
48"	21"	3"



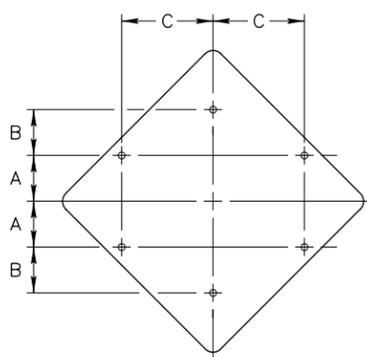
SIGN SIZE	A	B
30"X30"	21"	3"
36"X36"	24"	3"



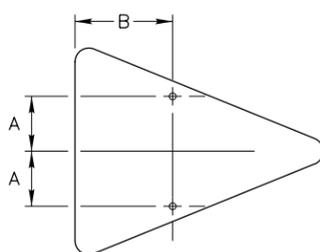
SIGN SIZE	A	B
24"X24"	18"	3"
30"X24"	18"	3"



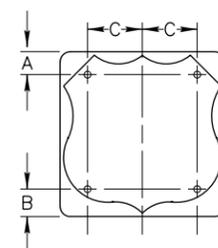
SIGN SIZE	A
18"X18"	10"
24"X24"	12"
30"X30"	15"



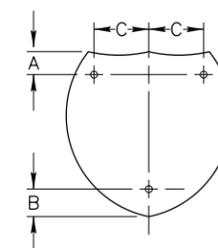
SIGN SIZE	A	B	C
36"X36"	8"	10"	12"
48"X48"	10"	—	20"



SIGN SIZE	A	B
36"X48"	9"	16"



SIGN SIZE	A	B	C
36"X36"	5"	6"	12"



SIGN SIZE	A	B	C
36"X36"	5"	6"	12"
45"X36"	5"	6"	16"

**NOTES:**

1. ALL MOUNTING HOLES SHALL BE 3/8" DIAMETER.

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

ORIGINAL SIGNED BY:  
RYAN D. LANCASTER  
DATE MAY 1, 2017

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	12-01	NQB						
2	06-07	HEB						
3	07-14	HEB						
4	05-17	HEB						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
CADD FILE NAME: 616-1\_0517.dgn  
DRAWING DATE: DECEMBER, 1994

**IDAHO TRANSPORTATION DEPARTMENT**

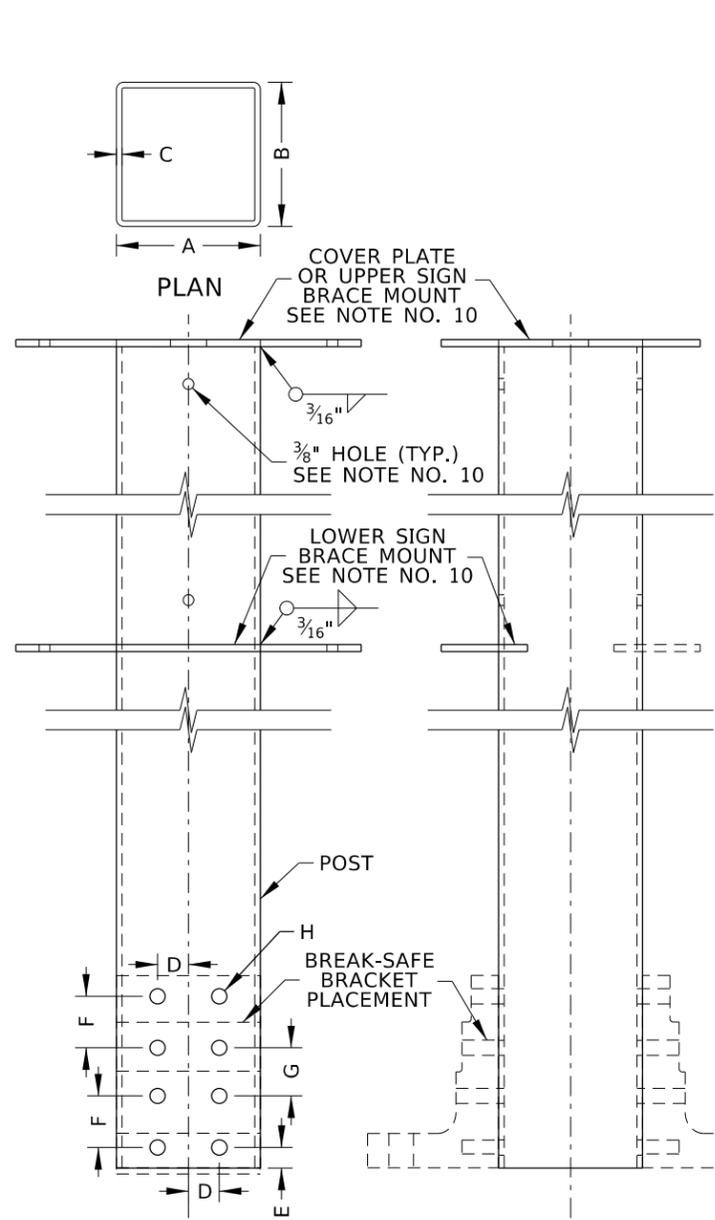


BOISE IDAHO

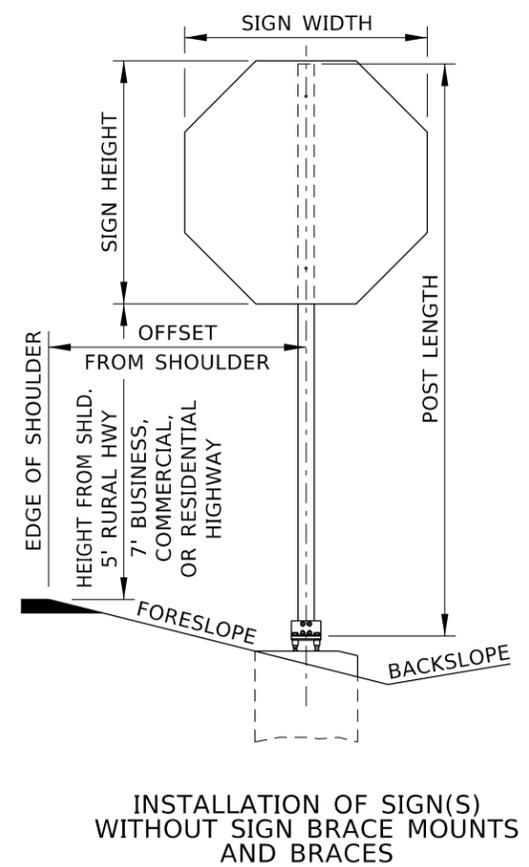
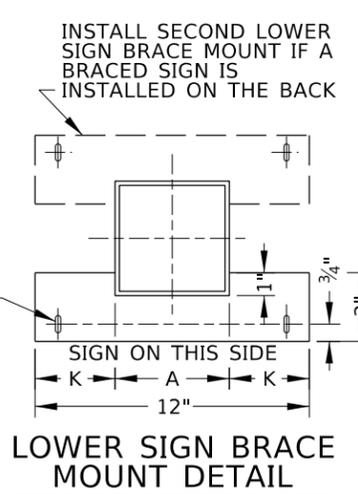
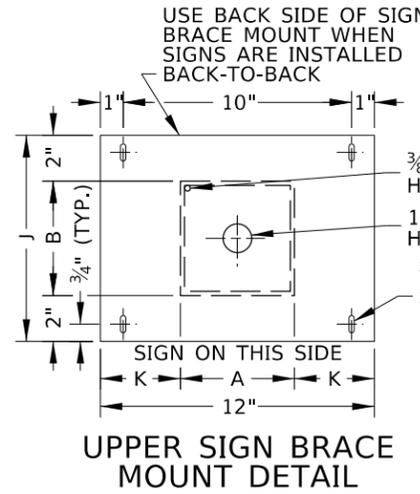
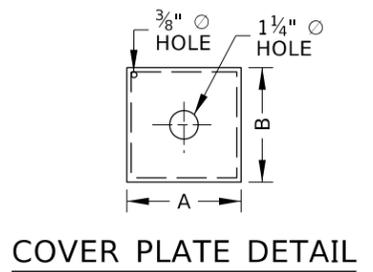
ORIGINAL SIGNED BY: KEVIN SABLAN  
DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING  
**PUNCHING SCHEDULE FOR TYPE "B" OR TYPE "E" SIGNS**

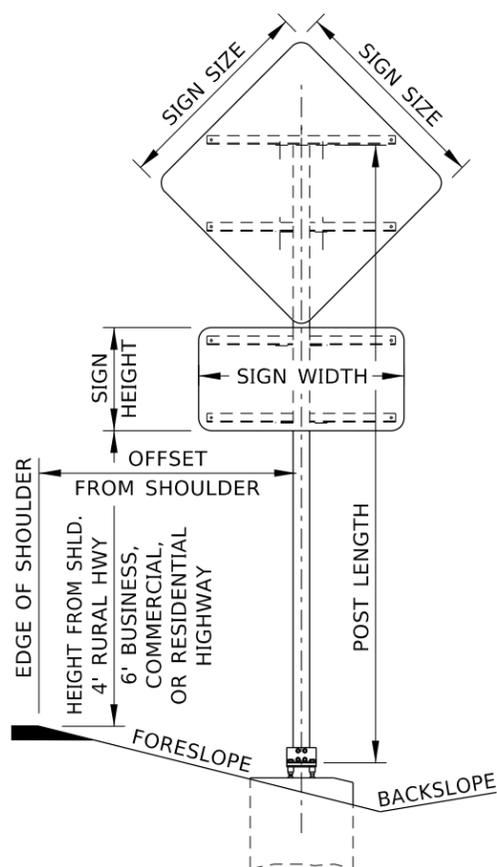
**English**  
STANDARD DRAWING NO.  
**616-1**  
SHEET 1 OF 1



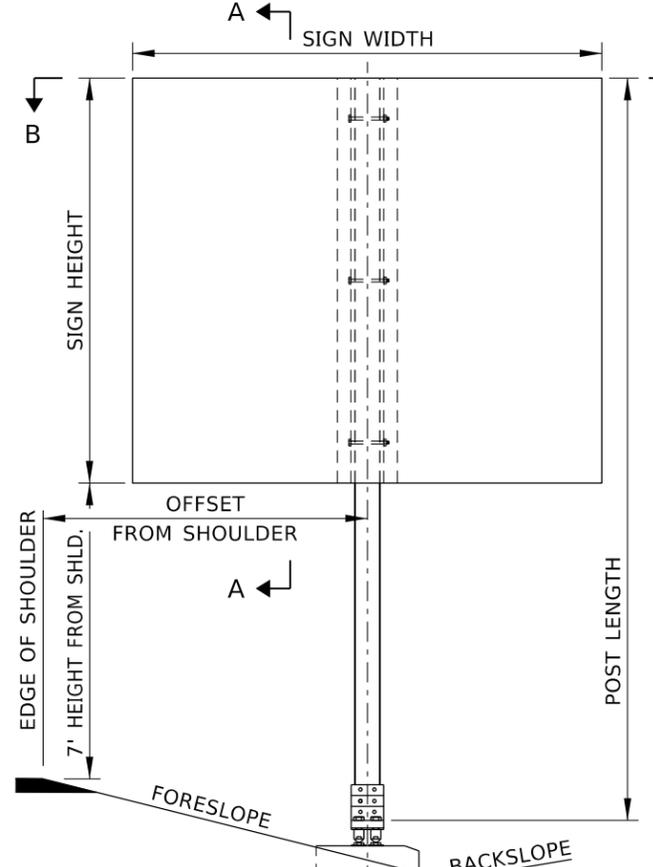
**TYPE B - STEEL TUBE POST**  
SEE NOTE NOS. 10 & 11



**INSTALLATION OF SIGN(S) WITHOUT SIGN BRACE MOUNTS AND BRACES**

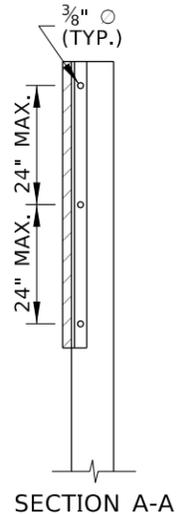
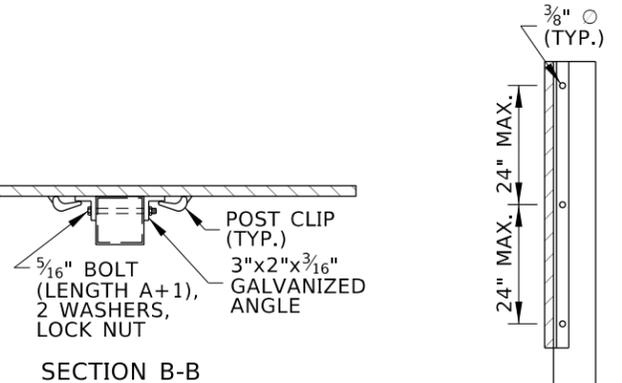
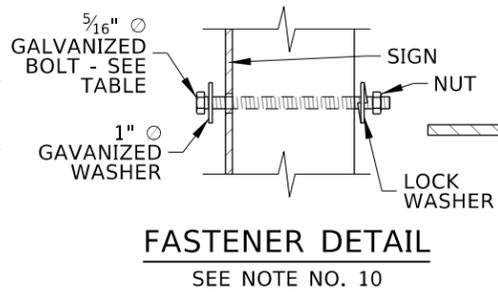


**INSTALLATION OF SIGNS WITH SIGN BRACE MOUNTS AND BRACES**



**INSTALLATION OF TYPE C EXTRUDED ALUMINUM SIGN**  
SEE NOTE NO. 11

**SIGN ASSEMBLY MEASUREMENTS**



**SIGN POST, FOUNDATION, AND TEMPLATE TABLE**

POST TYPE	STEEL TUBE POST SIZE			POST WEIGHT (LB/FT)	MAXIMUM SIGN LOAD (SFxFT)	BREAK-SAFE ASSEMBLY MODEL	SIGN BRACE MOUNT*					SIZE (DIAxDEPTH) (INxIN)	CONCRETE (CY)	FOUNDATION			REINFORCING STEEL HOOPS			TEMPLATE			FASTENERS SIGN BOLT LENGTH (IN)		
	A (IN)	B (IN)	C (IN)				D (IN)	E (IN)	F (IN)	G (IN)	H (IN)			J (IN)	K (IN)	BAR SIZE	NUMBER OF BARS	LENGTH (FT)	BAR SIZE	NUMBER OF BARS	LENGTH (FT)	L (IN)		M (IN)	N (IN)
B-2	3	4	3/16	8.15	8.15	AS4	1 1/16	1 7/16	2 1/16	-	9/16	8	4 1/2	24x60	0.6	4	6	26	4	4	21	7 1/16	36	4 1/4	4 1/2
B-3	5	5	3/16	11.96	11.97	B525	1 1/8	3/4	1 7/8	1 3/4	9/16	9	3 1/2	30x60	0.9	4	6	26	4	4	28	13	40	3	5 1/2
B-4	6	6	3/16	14.51	14.53	B525	1 1/8	3/4	1 7/8	1 3/4	9/16	10	3	30x60	0.9	4	6	26	4	4	28	14	40	3	6 1/2

\* SEE NOTE NO. 10  
† SEE NOTE NO. 11

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	02-23	RDL						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
CADD FILE NAME: 616-6\_0423.dgn  
DRAWING DATE: DECEMBER, 2016

**IDAHO TRANSPORTATION DEPARTMENT**  
YOUR Safety → YOUR Mobility → YOUR Economic Opportunity  
BOISE IDAHO

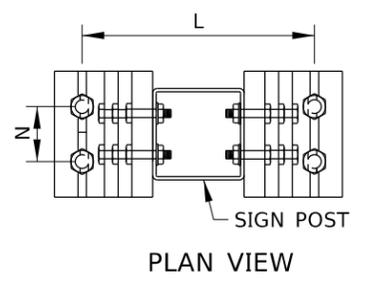
ORIGINAL SIGNED BY: MONICA CRIDER  
HIGHWAY DESIGN ENGINEER

STANDARD DRAWING  
**STEEL SIGN POST AND FOUNDATION**  
TYPE B - STEEL TUBE POST

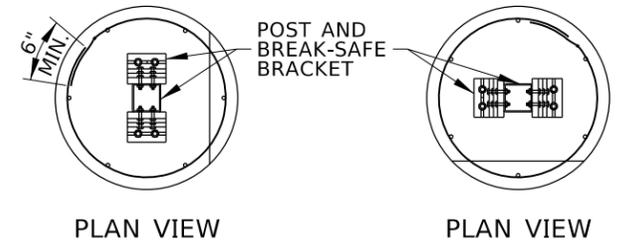
ENGLISH  
STANDARD DRAWING NO. 616-6  
SHEET 1 OF 2

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER  
RYAN D. LANCASTER  
STATE OF IDAHO  
MAINT 8, 2014

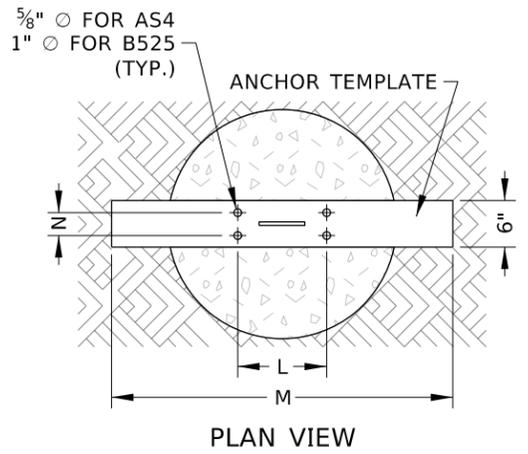


PLAN VIEW

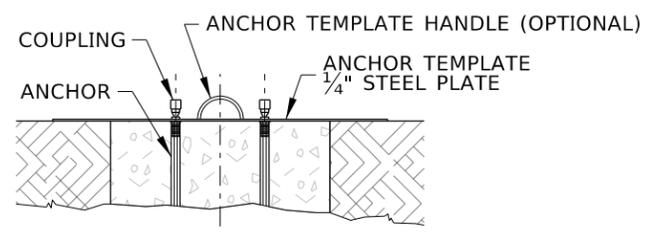


PLAN VIEW

**BREAK-SAFE BRACKET DETAIL**



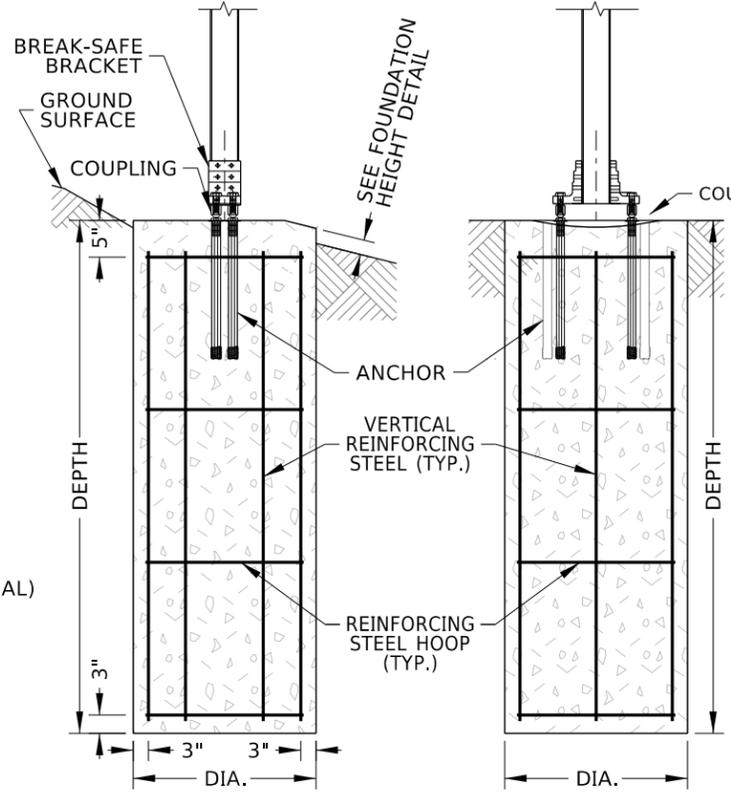
PLAN VIEW



ELEVATION

**TEMPLATE DETAIL**

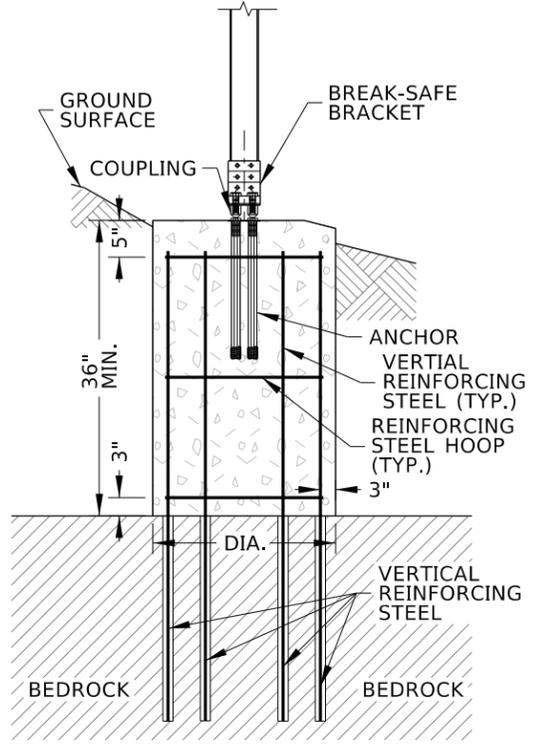
SEE NOTE NO. 3



ELEVATION FRONT VIEW  
ELEVATION SIDE VIEW

**FOUNDATION**

SEE NOTE NOS. 8 & 9



ELEVATION FRONT VIEW

**ALTERNATE FOUNDATION**

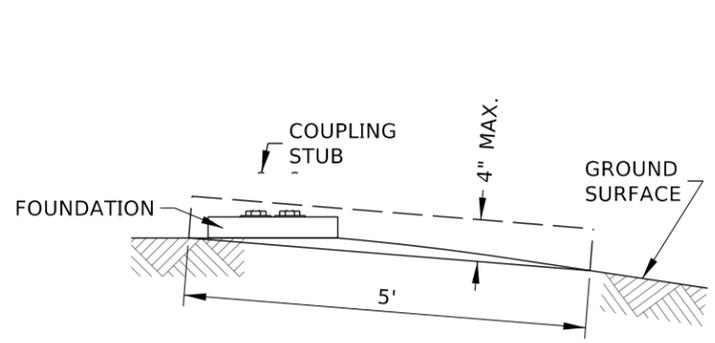
SEE NOTE NO. 9

ALTERNATE FOUNDATION TABLE				
SIZE (DIAxDEPTH) (INxIN)	CONCRETE (CY)	REINFORCING STEEL HOOPS*		
		BAR SIZE	NUMBER OF BARS	LENGTH (FT)
24x36	0.35	4	4	16
30x36	0.55	4	4	21
36x36	0.80	4	4	25

\* SEE SIGN POST, FOUNDATION, AND TEMPLATE TABLE FOR VERTICAL REINFORCING STEEL.

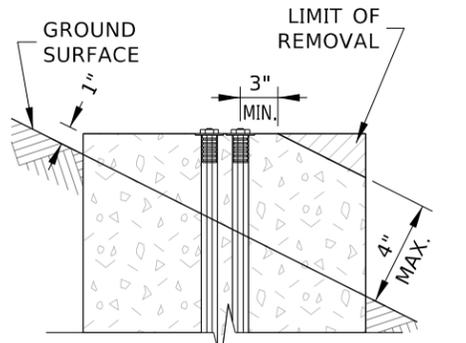
**NOTES**

- USE TYPE B - STEEL TUBE POSTS - WITH TYPE B - SHEET ALUMINUM, TYPE C - EXTRUDED ALUMINUM PANEL, AND TYPE E - HDO PLYWOOD SIGNS.
- SEE THE TRAFFIC MANUAL TO CALCULATE SIGN LOAD PER POST.
- USE BREAK-SAFE BREAKAWAY SUPPORT SYSTEM WITH TYPE B - STEEL TUBE POSTS. FOLLOW THE MANUFACTURERS INSTRUCTIONS. FABRICATE AND USE AN ANCHOR TEMPLATE TO ENSURE ANCHOR PLACEMENT.
- SEE PROJECT SIGN SUMMARY FOR SIGN ASSEMBLY DIMENSIONS.
- INSTALL ONLY ONE TYPE B - STEEL TUBE POST PER SIGN ASSEMBLY.
- ALIGN POST SO DIMENSION B IS PARALLEL TO THE TRAFFIC DIRECTION.
- STEEL TUBE POSTS (WITH THE BREAK-SAFE BREAKAWAY SUPPORT SYSTEM SHOWN) DO NOT NEED TO BE SHIELDED BY GUARDRAIL OR BARRIER. WHEN STEEL TUBE POSTS ARE INSTALLED BEHIND GUARDRAIL OR BARRIER, ENSURE THE POSTS ARE OUTSIDE OF THE GUARDRAIL OR BARRIER WORKING WIDTH.
- CAST FOUNDATION IN NATIVE SOILS IN AN AUGERED HOLE. IF AN AUGURED HOLE IS IMPRACTICAL, CAST THE FOUNDATION IN A CORRUGATED METAL PIPE FORM AND BACKFILLED IN ACCORDANCE WITH SECTION 210.
- IF SOLID BEDROCK IS ENCOUNTERED WITHIN THE FOUNDATION DEPTH, USE THE ALTERNATE FOUNDATION. QUANTITIES SHOWN FOR THE ALTERNATE FOUNDATION ASSUME 36" DEPTH TO BEDROCK. SOCKET VERTICAL REINFORCING STEEL FOR THE DEPTH SHOWN IN THE FOUNDATION MATERIAL QUANTITIES. DRILL 2 INCH MINIMUM DIAMETER HOLES. FILL DRILLED HOLES WITH GROUT, TYPE B, CLASS 1. NOTIFY THE ENGINEER IF THE DEPTH TO SOLID BEDROCK IS LESS THAN 36". IF LESS THAN 36", REDESIGN OF THE FOUNDATION MAY BE REQUIRED.
- TYPE B - SHEET ALUMINUM - OR TYPE E - HDO PLYWOOD - SIGNS ARE INSTALLED DIRECTLY TO THE POST OR WITH BRACES OR BRACKETS DEPENDENT ON SIGN SIZE AND APPLICATION.
  - IF SIGNS ARE INSTALLED DIRECTLY TO THE POST, WELD A COVER PLATE ON TOP OF THE POST AND DRILL 3/8" HOLES INTO POST TO INSTALL SIGN FASTENERS.
  - IF SIGNS ARE INSTALLED WITH BRACES, WELD SIGN BRACE MOUNTS AND FASTEN THE BRACES TO THE SIGN BRACE MOUNTS.
- FOR TYPE C - EXTRUDED ALUMINUM SIGNS, WELD A COVER PLATE ON TOP OF THE POST AND AFFIX GALVANIZED ANGLE TO POST AND CLIP SIGN TO ANGLE.
- SIGNS CAN BE MOUNTED BACK-TO-BACK IF THE SHAPE OF STOP, YIELD, OR WARNING SIGNS ARE NOT SHIELDED.
- INSTALL SIGNS AT THE FOLLOWING HEIGHTS:
  - IF INSTALLED IN A RURAL AREA, 5 FEET ABOVE THE PAVEMENT ELEVATION OR 4 FEET IF A SUPPLEMENTARY PLAQUE IS INSTALLED BELOW THE SIGN.
  - IF INSTALLED IN THE VICINITY OF A CURB OR IN A BUSINESS, COMMERCIAL, OR RESIDENTIAL AREA WHERE PARKING OR PEDESTRIAN MOVEMENTS ARE LIKELY, 7 FEET ABOVE THE PAVEMENT ELEVATION OR 6 FEET IF A SUPPLEMENTARY PLAQUE IS INSTALLED BELOW THE SIGN. IF INSTALLED LOWER THAN 7 FEET, ENSURE SIGNS DO NOT PROJECT MORE THAN 4 INCHES INTO THE PEDESTRIAN FACILITY.
- WHEN THE SIGN IS INSTALLED ON A BACKSLOPE, ENSURE THE SIGN POST IS AT LEAST 5' HIGHER THAN THE GROUND SURFACE.
- ENSURE NO PART OF THE FOUNDATION OR STUB OF BREAKAWAY SYSTEM PROJECT MORE THAN 4 IN. ABOVE ANY 5 FT. CHORD ALIGNED PERPENDICULARLY TO THE EDGE OF THE HIGHWAY BETWEEN A POINT ON THE GROUND SURFACE ON ONE SIDE OF THE SUPPORT TO A POINT ON THE GROUND SURFACE ON THE OTHER SIDE OF THE SUPPORT.
- DRAWING NOT TO SCALE.



**BREAK-SAFE COUPLING STUB HEIGHT DETAIL**

SEE NOTE NO. 15



**FOUNDATION HEIGHT DETAIL**

SEE NOTE NO. 15

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	02-23	RDL						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
CADD FILE NAME: 616-6\_0423.dgn  
DRAWING DATE: DECEMBER, 2016

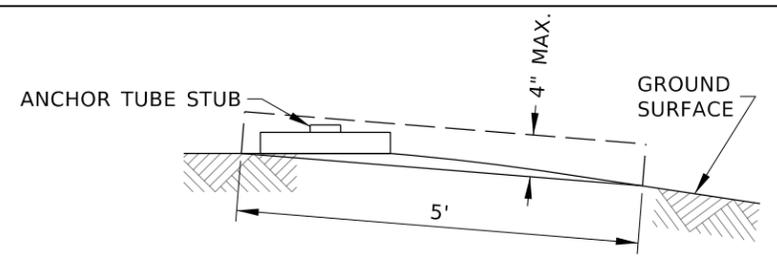
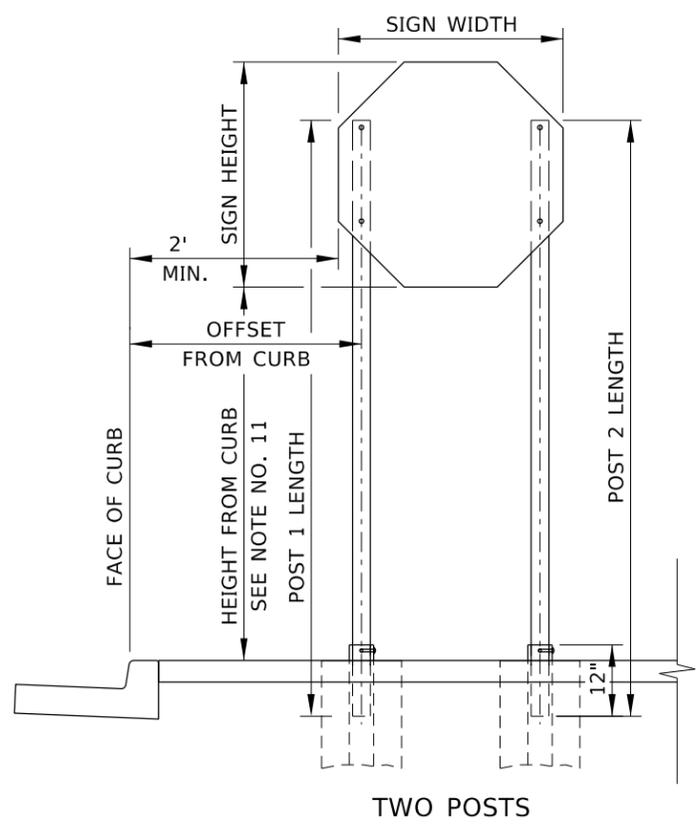
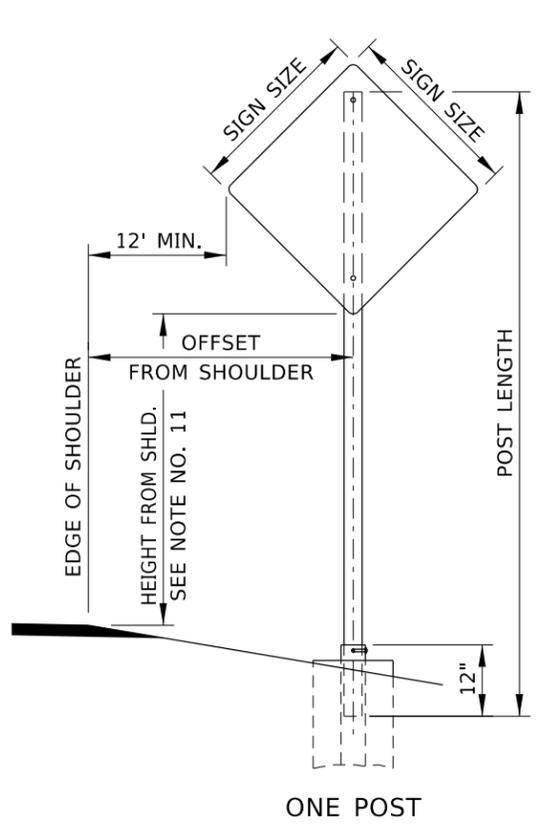
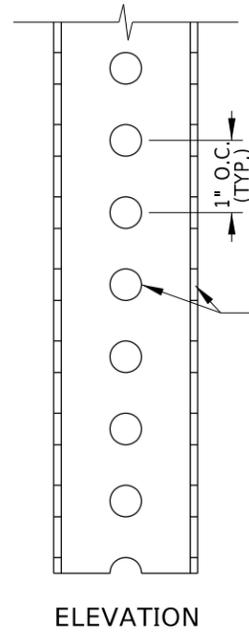
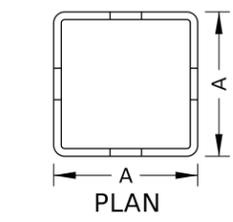
**IDAHO TRANSPORTATION DEPARTMENT**  
YOUR Safety - YOUR Mobility - YOUR Economic Opportunity  
BOISE IDAHO

ORIGINAL SIGNED BY: MONICA CRIDER  
HIGHWAY DESIGN ENGINEER

STANDARD DRAWING  
**STEEL SIGN POST AND FOUNDATION**  
TYPE B - STEEL TUBE POST

ENGLISH  
STANDARD DRAWING NO.  
**616-6**  
SHEET 2 OF 2





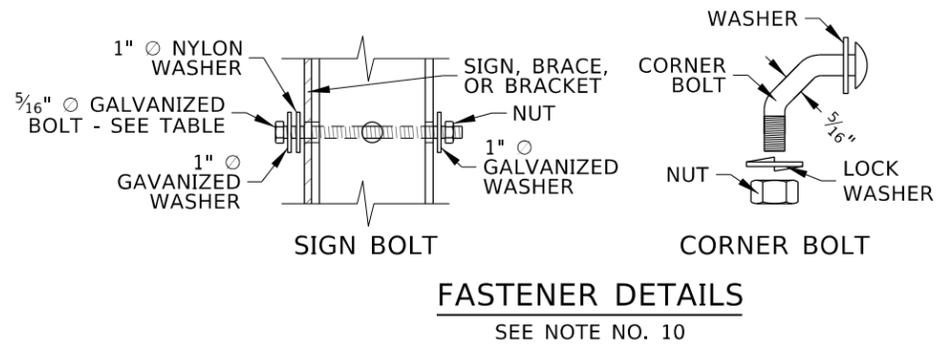
**FOUNDATION AND STUB HEIGHT DETAIL**

SEE NOTE NO. 15

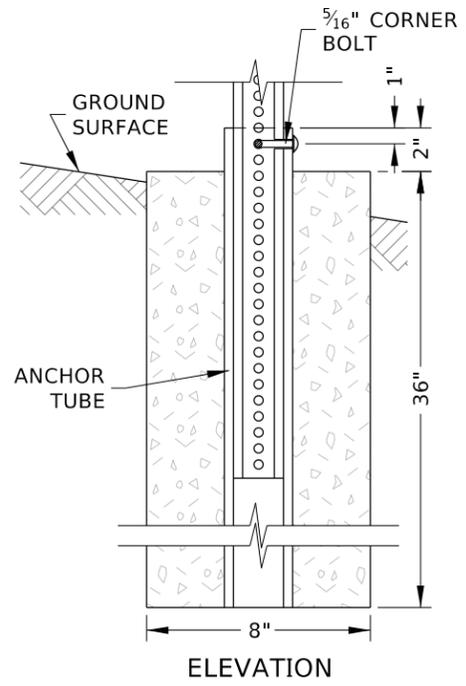
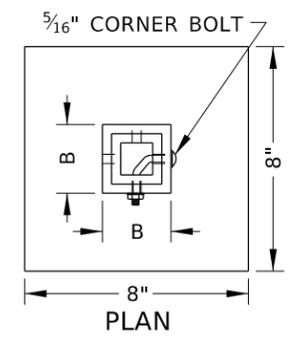
**NOTES**

1. USE TYPE E - PERFORATED STEEL TUBE POSTS - WITH TYPE B - SHEET ALUMINUM AND TYPE E - HDO PLYWOOD SIGNS.
2. SEE THE TRAFFIC MANUAL TO CALCULATE SIGN LOAD PER POST.
3. SEE PROJECT SIGN SUMMARY FOR SIGN ASSEMBLY DIMENSIONS.
4. USE ONE OR MORE TYPE E - PERFORATED STEEL TUBE POST. DO NOT MIX E-1 AND E-2 POSTS ON THE SAME SIGN ASSEMBLY.
5. POST 1 IS CLOSEST TO THE HIGHWAY, WHETHER INSTALLED ON THE RIGHT OR LEFT SIDE.
6. A BREAKAWAY DEVICE MUST BE INSTALLED IF THREE POSTS ARE USED. REFER TO THE ITD QUALIFIED PRODUCTS LIST FOR BREAKAWAY DEVICES.
7. TYPE E - PERFORATED STEEL TUBE POSTS - DO NOT NEED TO BE SHIELDED BY GUARDRAIL OR BARRIER. WHEN PERFORATED STEEL POSTS ARE INSTALLED BEHIND GUARDRAIL OR BARRIER, ENSURE THE POSTS ARE OUTSIDE OF THE GUARDRAIL OR BARRIER WORKING WIDTH.
8. SIGNS CAN BE MOUNTED BACK-TO-BACK IF THE SHAPE OF STOP, YIELD, OR WARNING SIGNS ARE NOT SHIELDED.
9. SIGNS ARE INSTALLED WITH OR WITHOUT BRACES DEPENDENT ON SIGN SIZE AND APPLICATION.
10. TYPE B - SHEET ALUMINUM - OR TYPE E - HDO PLYWOOD - SIGNS CAN BE AFFIXED TO THE POST OR THROUGH BRACES OR BRACKETS.
11. INSTALL SIGNS AT THE FOLLOWING HEIGHTS:
  - A. IF INSTALLED IN A RURAL AREA, 5 FEET ABOVE THE PAVEMENT ELEVATION OR 4 FEET IF A SUPPLEMENTARY PLAQUE IS INSTALLED BELOW THE SIGN.
  - B. IF INSTALLED IN THE VICINITY OF A CURB OR IN A BUSINESS, COMMERCIAL, OR RESIDENTIAL AREA WHERE PARKING OR PEDESTRIAN MOVEMENTS ARE LIKELY, 7 FEET ABOVE THE PAVEMENT ELEVATION OR 6 FEET IF A SUPPLEMENTARY PLAQUE IS INSTALLED BELOW THE SIGN. IF INSTALLED LOWER THAN 7 FEET, ENSURE SIGNS DO NOT PROJECT MORE THAN 4 INCHES INTO THE PEDESTRIAN FACILITY.
12. PRECAST FOUNDATION OR CAST FOUNDATION IN PLACE. ENSURE THE BOTTOM OF THE FOUNDATION IS KEPT OPEN TO DRAIN. IF THE ANCHOR TUBE IS PERFORATED, ENSURE THE INSIDE OF THE ANCHOR REMAINS OPEN.
13. IF SOLID BEDROCK IS ENCOUNTERED WITHIN THE FOUNDATION DEPTH, DRILL A 4.5 INCH VERTICAL HOLE AND SOCKET THE ANCHOR TUBE. FILL DRILLED HOLES WITH GROUT, TYPE B, CLASS 1. ENSURE THE INSIDE OF THE ANCHOR TUBE REMAINS OPEN. WHEN INSTALLED IN BEDROCK, ENSURE THE E-1 POST IS EMBEDDED 18 INCHES DEEP AND THE E-2 POST IS EMBEDDED 24 INCHES.
14. WHEN THE SIGN IS INSTALLED ON A BACKSLOPE, ENSURE THE SIGN POST IS AT LEAST 5' HIGHER THAN THE GROUND SURFACE.
15. ENSURE NO PART OF THE FOUNDATION OR SIGN POST STUB PROJECTS MORE THAN 4 IN. ABOVE ANY 5 FT. CHORD ALIGNED PERPENDICULARLY TO THE EDGE OF THE HIGHWAY BETWEEN A POINT ON THE GROUND SURFACE ON ONE SIDE OF THE SUPPORT TO A POINT ON THE GROUND SURFACE ON THE OTHER SIDE OF THE SUPPORT.
16. DRAWING NOT TO SCALE.

**SIGN ASSEMBLY MEASUREMENTS**



**FASTENER DETAILS**  
SEE NOTE NO. 10



**FOUNDATION**  
SEE NOTE NOS. 12 & 13

SIGN POST AND FOUNDATION TABLE										
POST TYPE	TYPE E PERFORATED STEEL TUBE POST		POST WEIGHT (LB/FT)	MAXIMUM SIGN LOAD (SFxFT)	FOUNDATION		ANCHOR TUBE		FASTENERS	
	PERFORATED TUBE POST SIZE A (IN)	STEEL TUBE POST SIZE GAUGE			SIZE (INxINxIN)	CONCRETE (CY)	B (IN)	GAUGE	POST WEIGHT (LB/FT)	SIGN BOLT LENGTH (IN)
E-1	2	12	2.42	43	8x8x36	0.05	2 1/2 x 2 1/2	7	5.59	2 1/2
E-2	2 1/2	12	4.01	91	8x8x36	0.05	3x3	7	6.87	3

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	02-92	JEC	6	05-15	HEB			
2	12-94	HEB	7	12-16	HEB			
3	06-99	HEB	8	02-23	RDL			
4	12-01	NQB						
5	12-13	HEB						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
CADD FILE NAME: 616-7\_0423.dgn  
DRAWING DATE: JULY, 1991

**IDAHO TRANSPORTATION DEPARTMENT**  
YOUR Safety-YOUR Mobility-YOUR Economic Opportunity  
BOISE IDAHO

ORIGINAL SIGNED BY: MONICA CRIDER  
HIGHWAY DESIGN ENGINEER

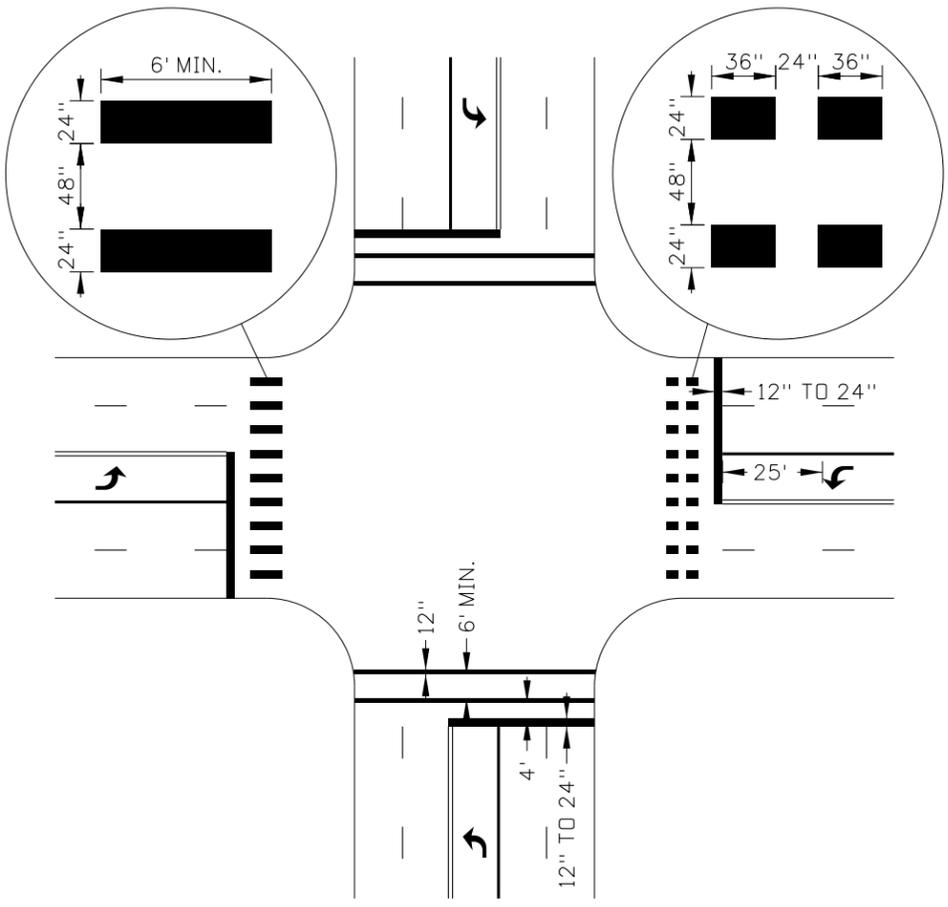
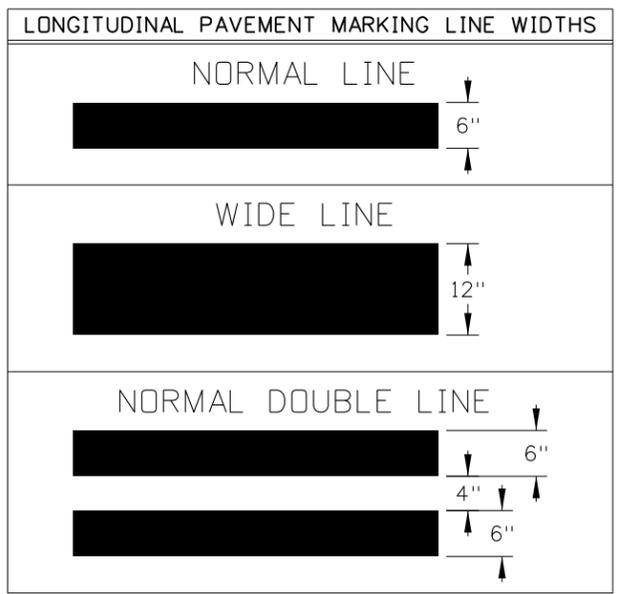
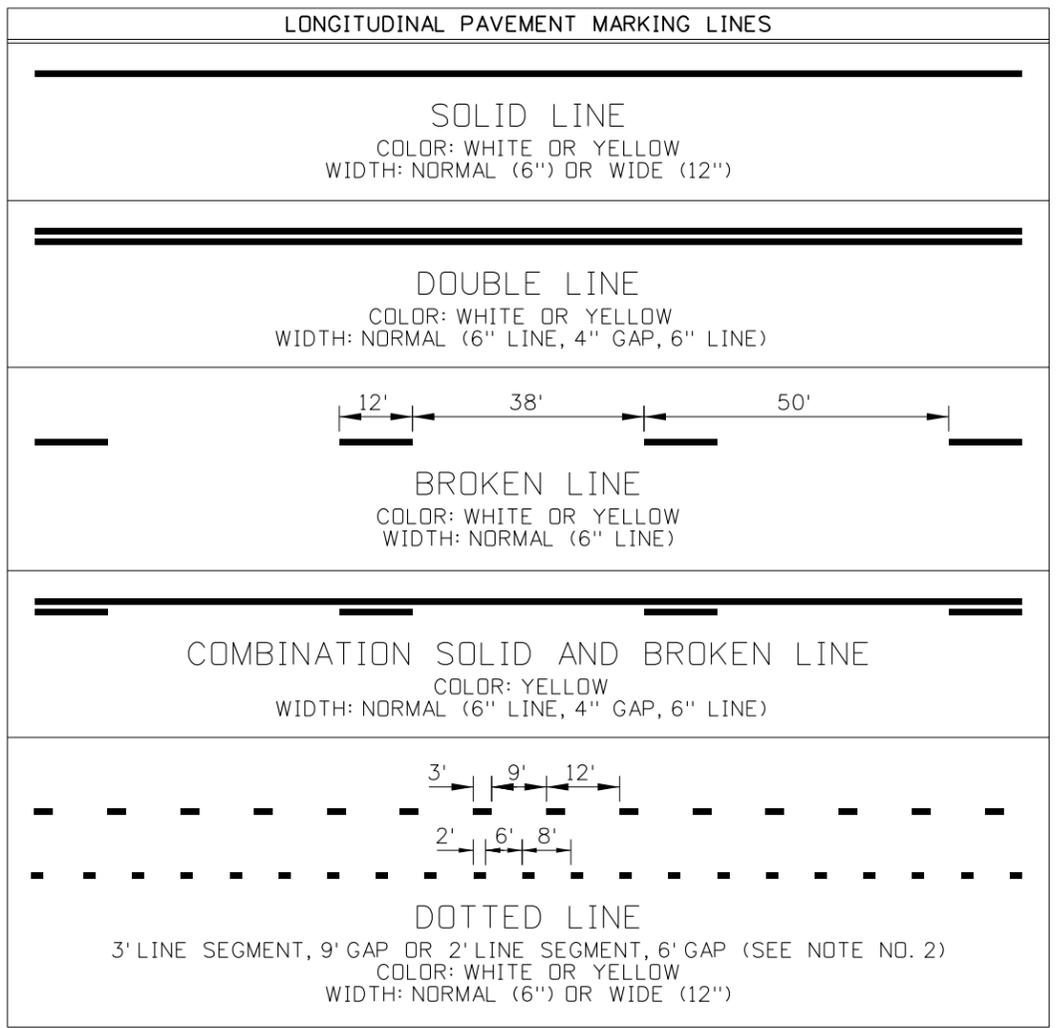
STANDARD DRAWING  
STEEL SIGN POST AND FOUNDATION  
TYPE E - PERFORATED STEEL TUBE POST

ENGLISH  
STANDARD DRAWING NO.  
616-7  
SHEET 1 OF 1

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER  
RYAN D. LANCASTER  
STATE OF IDAHO  
LICENSED PROFESSIONAL ENGINEER  
NO. 3683  
MAINT. 1, 2014

**NOTES**



- USE WHITE AND YELLOW PAVEMENT MARKINGS AS FOLLOWS:  
WHITE:  
A. TO SEPARATE TRAFFIC TRAVELING IN THE SAME DIRECTION.  
B. THE RIGHT-HAND EDGE OF THE HIGHWAY.  
YELLOW:  
A. TO SEPARATE TRAFFIC TRAVELING IN OPPOSITE DIRECTIONS.  
B. THE LEFT-HAND EDGE DIVIDED HIGHWAYS, ONE-WAY STREETS, OR RAMP.  
C. TWO-WAY LEFT-TURN LANES.
- USE LONGITUDINAL PAVEMENT MARKINGS AS FOLLOWS:  
A. USE SOLID LINES TO INDICATE THE LEFT OR RIGHT EDGE OF TRAVEL WAY OR TO DISCOURAGE LANE CHANGING.  
B. USE DOUBLE LINES TO PROHIBIT PASSING OR LANE CHANGING.  
C. USE BROKEN LINES TO INDICATE PASSING OR LANE CHANGING ARE PERMITTED. USE THE 12' LINE SEGMENT, 38' GAP PATTERN FOR ALL SPEEDS.  
D. USE COMBINATION SOLID AND BROKEN LINES TO PROHIBIT PASSING IN ONE DIRECTION WHILE PERMITTING PASSING IN THE OPPOSITE DIRECTION OR TO INDICATE A TWO-WAY LEFT-TURN LANE.  
E. USE DOTTED LINES AS FOLLOWS:  
3' LINE SEGMENT, 9' GAP:  
I. TO SEPARATE A THROUGH LANE AND A LANE THAT BECOMES A MANDATORY EXIT OR TURN LANE (DROPPED LANE).  
II. TO SEPARATE THROUGH LANES AND TURN LANES OR RAMP.  
III. TO SEPARATE A THROUGH LANE AND AN AUXILIARY LANE 2 MILES OR LESS IN LENGTH BETWEEN FREEWAY ENTRANCE RAMP AND EXIT RAMP OR 1 MILE OR LESS IN LENGTH BETWEEN INTERSECTIONS.  
2' LINE SEGMENT, 6' GAP:  
I. AS A LANE LINE EXTENSION THROUGH AN INTERSECTION.
- USE 12' VEHICULAR TRAVEL LANES UNLESS OTHERWISE INDICATED. MEASURE LANE WIDTHS FROM THE CENTER OF LINE TO THE CENTER OF LINE.
- THE PAVEMENT MARKING APPLICATION EXAMPLES PRESENTED SHOW COMMON APPLICATION. MODIFY AS NEEDED TO ACCOMMODATE OTHER SITUATIONS.
- METHODS FOR DETERMINING TURN-LANE LENGTH ARE DESCRIBED IN THE ITD TRAFFIC MANUAL.
- USE 15W FOR POSTED SPEED LIMITS OF 45 MPH OR GREATER. USE 8W FOR POSTED SPEED LIMITS OF 40 MPH OR LESS. W IS THE OFFSET WIDTH IN FEET.
- USE DISTANCE L WHEN PRACTICAL. USE THE FOLLOWING EQUATION TO DETERMINE L:  
 $L = WS$   
WHERE:  
W = OFFSET WIDTH IN FEET  
S = POSTED SPEED LIMIT
- USE LANE-USE ARROWS AND WORD PAVEMENT MARKINGS AS SHOWN. SOME MARKINGS ARE OPTIONAL.  
A. USE TWO OR MORE LANE-USE ARROWS UNLESS THE TURN-LANE LENGTH IS LESS THAN 75 FEET. IF SHORTER THAN 75 FEET, THE DOWNSTREAM ARROW CAN BE OMITTED.  
B. USE TWO-WAY LEFT-TURN ARROW MARKINGS NEAR THE BEGINNING OF A TWO-WAY LEFT-TURN LANE AND EVERY 1/2 MILE THEREAFTER.
- BREAK EDGE AND LANE LINES AT INTERSECTIONS WITH MINOR ROADS. CONTINUE EDGE AND LANE LINES THROUGH DRIVEWAY APPROACHES.
- USE THE LANE DROP EXAMPLE EXIT RAMP WHEN THE LENGTH OF AN AUXILIARY DECELERATION EXCEEDS 1/2 MILE.
- ON TWO-LANE HIGHWAYS, PAINT THE CENTERLINE IN ONE DIRECTION IN ASCENDING STATION/MILEPOST DIRECTION AS SHOWN.
- DRAWINGS NOT TO SCALE.

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	03-20	RDL						
2	03-21	PBH						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 630-1\_0421.dgn

DRAWING DATE: DECEMBER, 2016

**IDAHO TRANSPORTATION DEPARTMENT**



BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN  
DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING

**PAVEMENT MARKINGS**

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

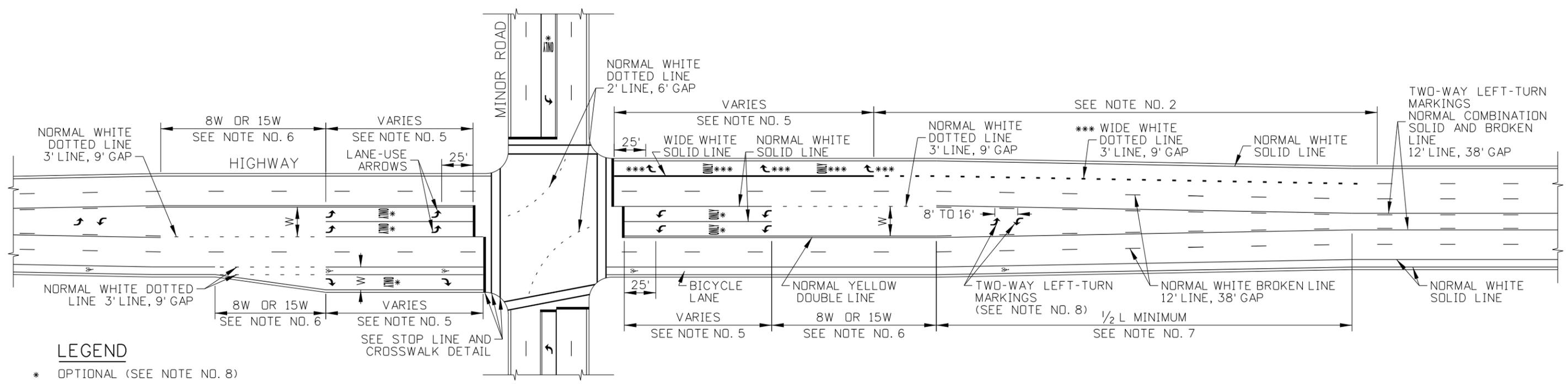
**English**

STANDARD DRAWING NO. **630-1**

SHEET 1 OF 4



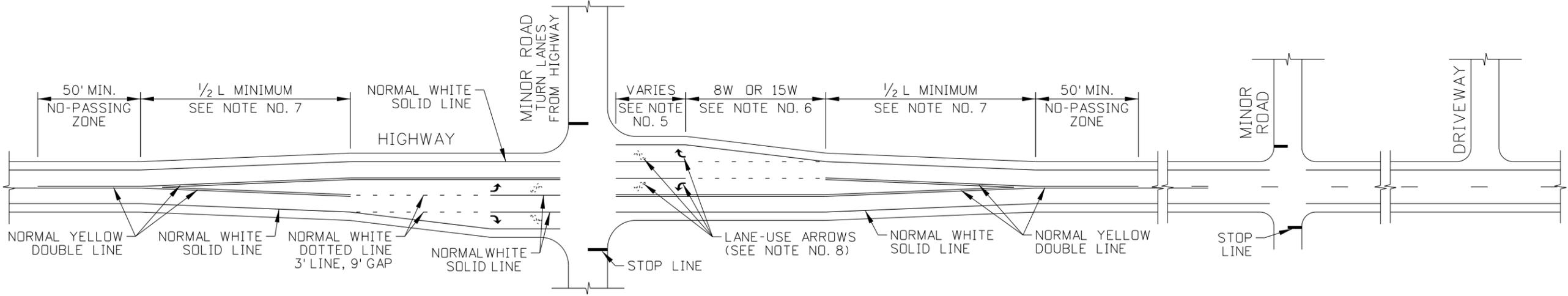
PROFESSIONAL ENGINEER  
LICENSED  
13683  
RYAN D. LANCASTER  
STATE OF IDAHO



**LEGEND**

- \* OPTIONAL (SEE NOTE NO. 8)
- \*\*\* REQUIRED WHERE THROUGH LANE BECOMES MANDATORY TURN LANE

**EXAMPLE URBAN HIGHWAY PAVEMENT MARKINGS**



**EXAMPLE RURAL HIGHWAY PAVEMENT MARKINGS**

SEE NOTE NO. 9

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	03-20	RDL						
2	03-21	PBH						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME: 630-1\_0421.dgn  
 DRAWING DATE: DECEMBER, 2016

**IDAHO TRANSPORTATION DEPARTMENT**



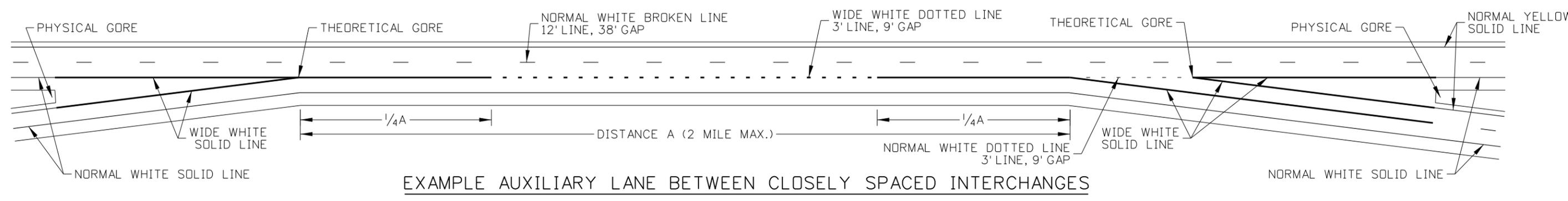
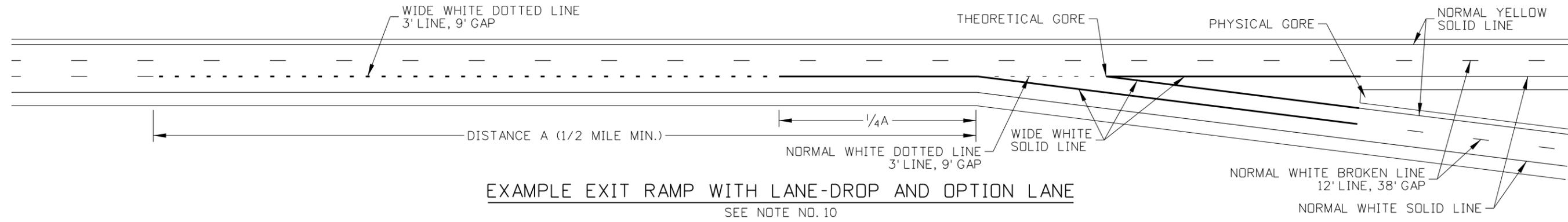
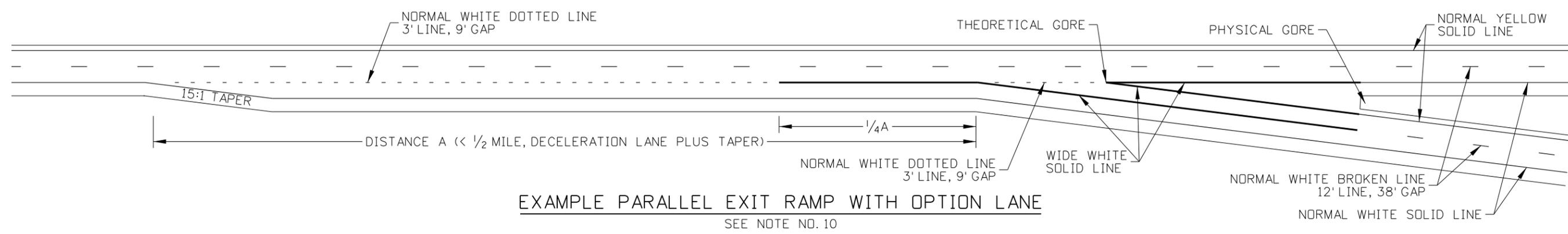
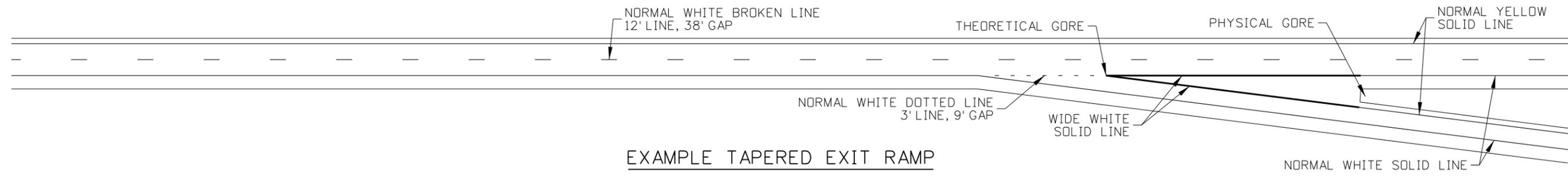
BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN  
 DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING  
**PAVEMENT MARKINGS**

**English**  
 STANDARD DRAWING NO.  
**630-1**  
 SHEET 2 OF 4

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho



REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	03-20	RDL						
2	03-21	PBH						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 630-1\_0421.dgn

DRAWING DATE: DECEMBER, 2016

**IDAHO TRANSPORTATION DEPARTMENT**



BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN  
DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING  
**PAVEMENT MARKINGS**

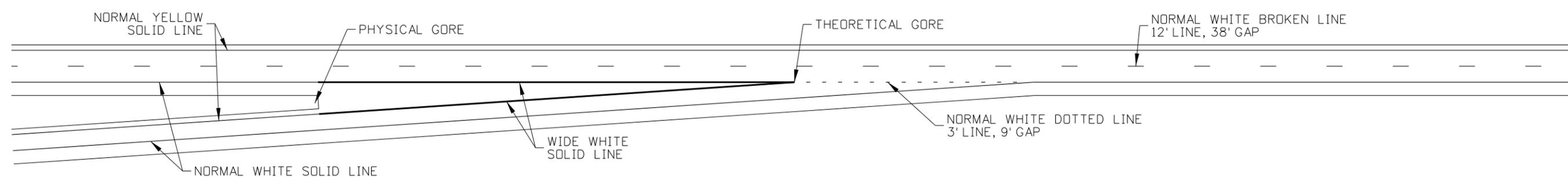
ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

**English**

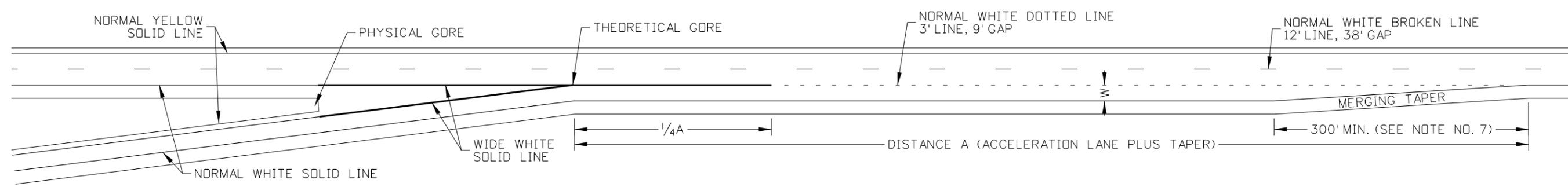
STANDARD DRAWING NO. 630-1

SHEET 3 OF 4

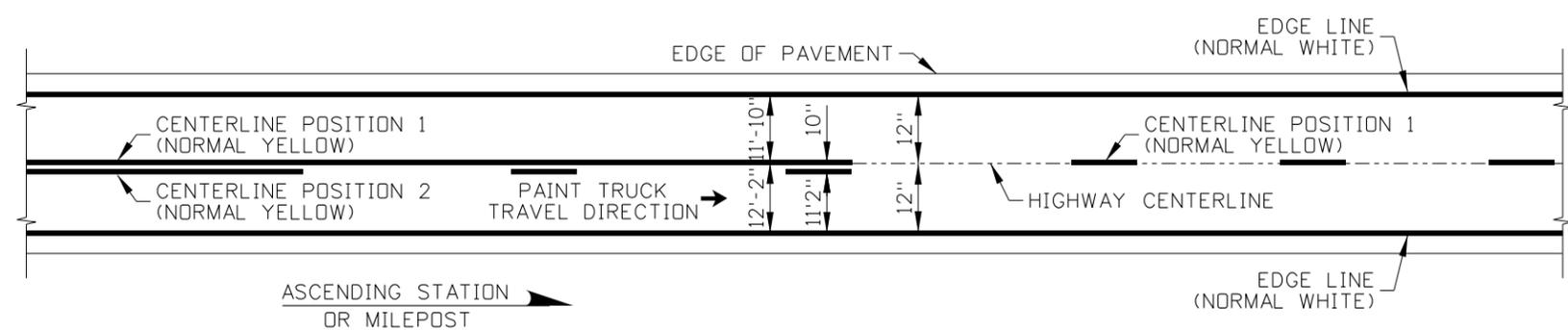
PROFESSIONAL ENGINEER  
LICENSED  
RYAN D. LANCASTER  
13683  
STATE OF IDAHO  
APR 14, 2016



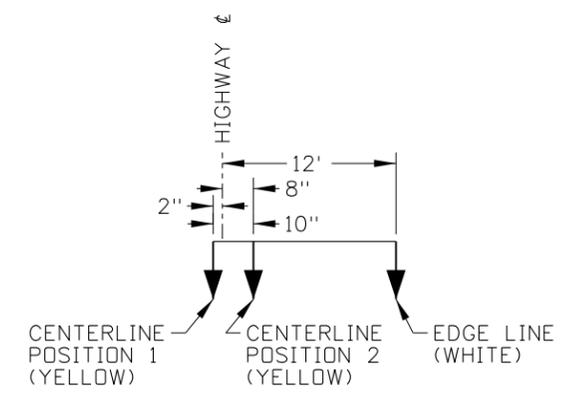
EXAMPLE TAPERED ENTRANCE RAMP



EXAMPLE PARALLEL ENTRANCE RAMP



PAVEMENT MARKINGS ON TWO-WAY HIGHWAYS  
DIMENSIONS TO CENTER OF PAVEMENT MARKINGS.  
SEE NOTE NO. 11 AND PAINT TRUCK SETUP DETAIL.



PAINT TRUCK SETUP DETAIL

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	03-20	RDL						
2	03-21	PBH						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
CADD FILE NAME: 630-1\_0421.dgn  
DRAWING DATE: DECEMBER, 2016

**IDAHO TRANSPORTATION DEPARTMENT**



BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN  
DESIGN/TRAFFIC SERVICES ENGINEER

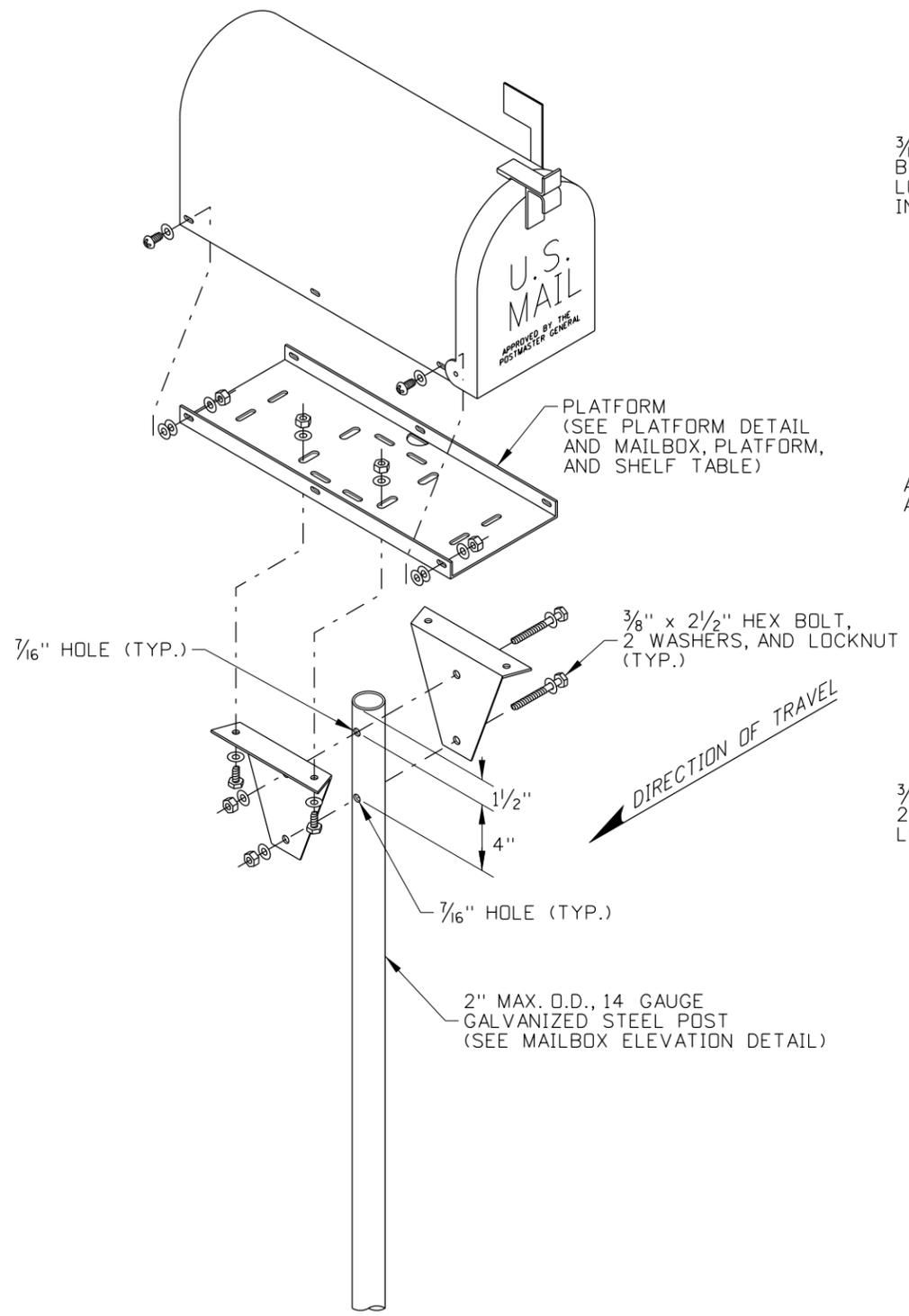
STANDARD DRAWING  
**PAVEMENT MARKINGS**

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

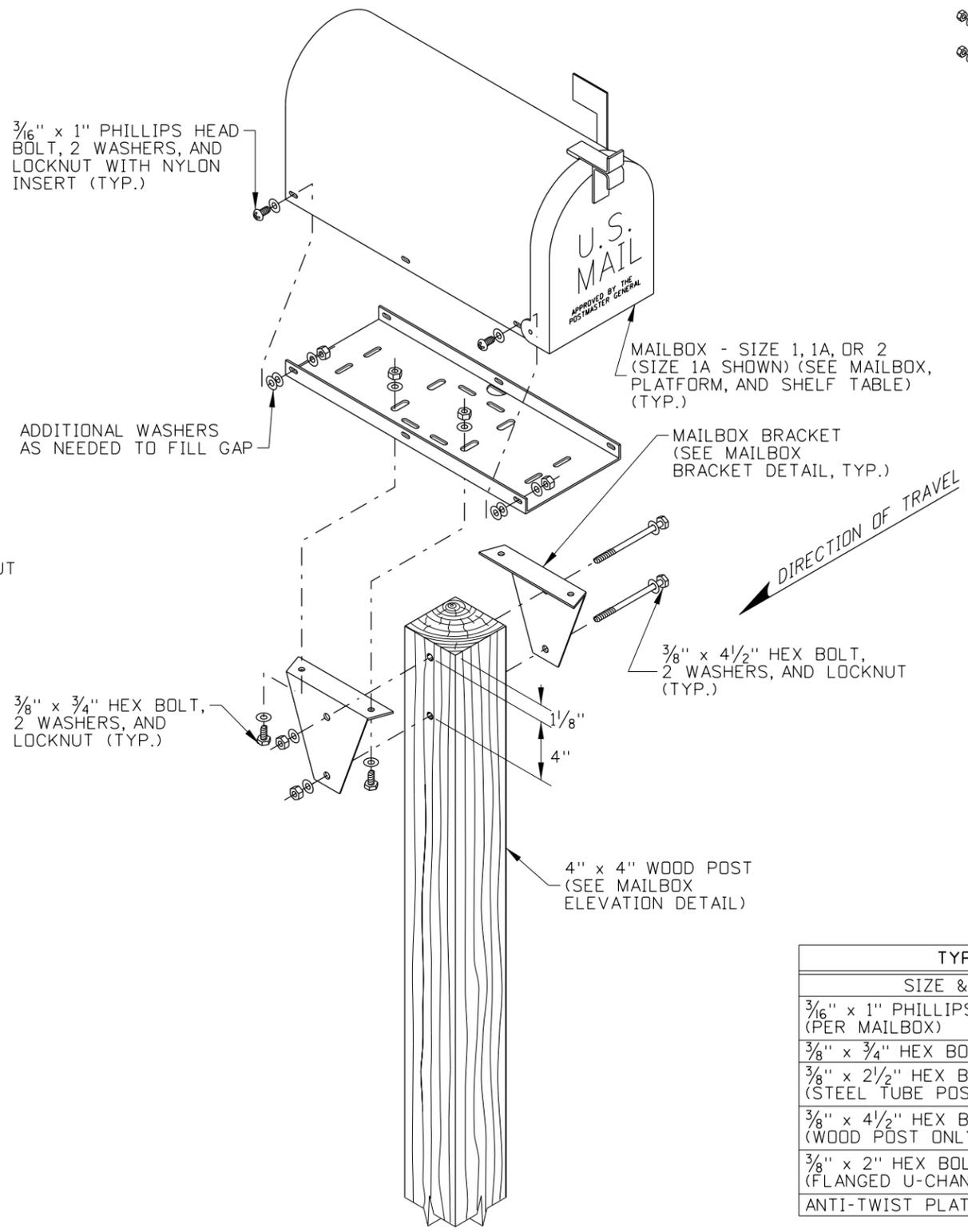
**English**

STANDARD DRAWING NO. **630-1**

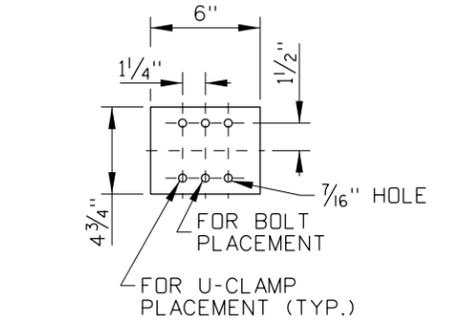
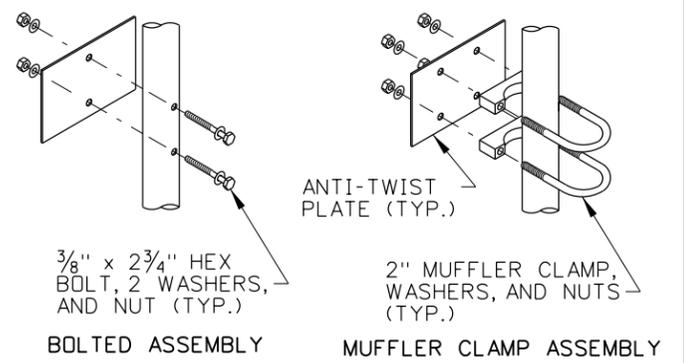
SHEET 4 OF 4



**TYPE A ASSEMBLY**  
STEEL TUBE POST



**TYPE A ASSEMBLY**  
WOOD POST



**ANTI-TWIST PLATE DETAIL**

TYPE A ASSEMBLY FASTENERS TABLE			
SIZE & TYPE	QUANTITY	WASHERS	LOCKNUTS
3/16" x 1" PHILLIPS HEAD BOLTS (PER MAILBOX)	4 MIN.	8 MIN.	4 MIN.
3/8" x 3/4" HEX BOLT (BRACKET)	4	8	4
3/8" x 2 1/2" HEX BOLT (STEEL TUBE POST ONLY)	2	4	2
3/8" x 4 1/2" HEX BOLT (WOOD POST ONLY)	2	4	2
3/8" x 2" HEX BOLT (FLANGED U-CHANNEL POST ONLY)	2	4	2
ANTI-TWIST PLATE ASSEMBLY	SEE ANTI-TWIST PLATE DETAIL		

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	7-92	MSM	6	7-10	MGL			
2	7-02	MSM	7	11-11	TEM			
3	7-05	MSM	8	01-13	RDL			
4	12-05	MSM						
5	10-08	JRV						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME: 634-1\_0113.dgn  
 DRAWING DATE: SEPTEMBER, 1993

**IDAHO TRANSPORTATION DEPARTMENT**



BOISE IDAHO

ORIGINAL SIGNED BY: LOREN THOMAS  
 HIGHWAYS PROGRAM OVERSIGHT ENGINEER

ORIGINAL SIGNED BY: TOM COLE  
 CHIEF ENGINEER

STANDARD DRAWING

**MAILBOXES**

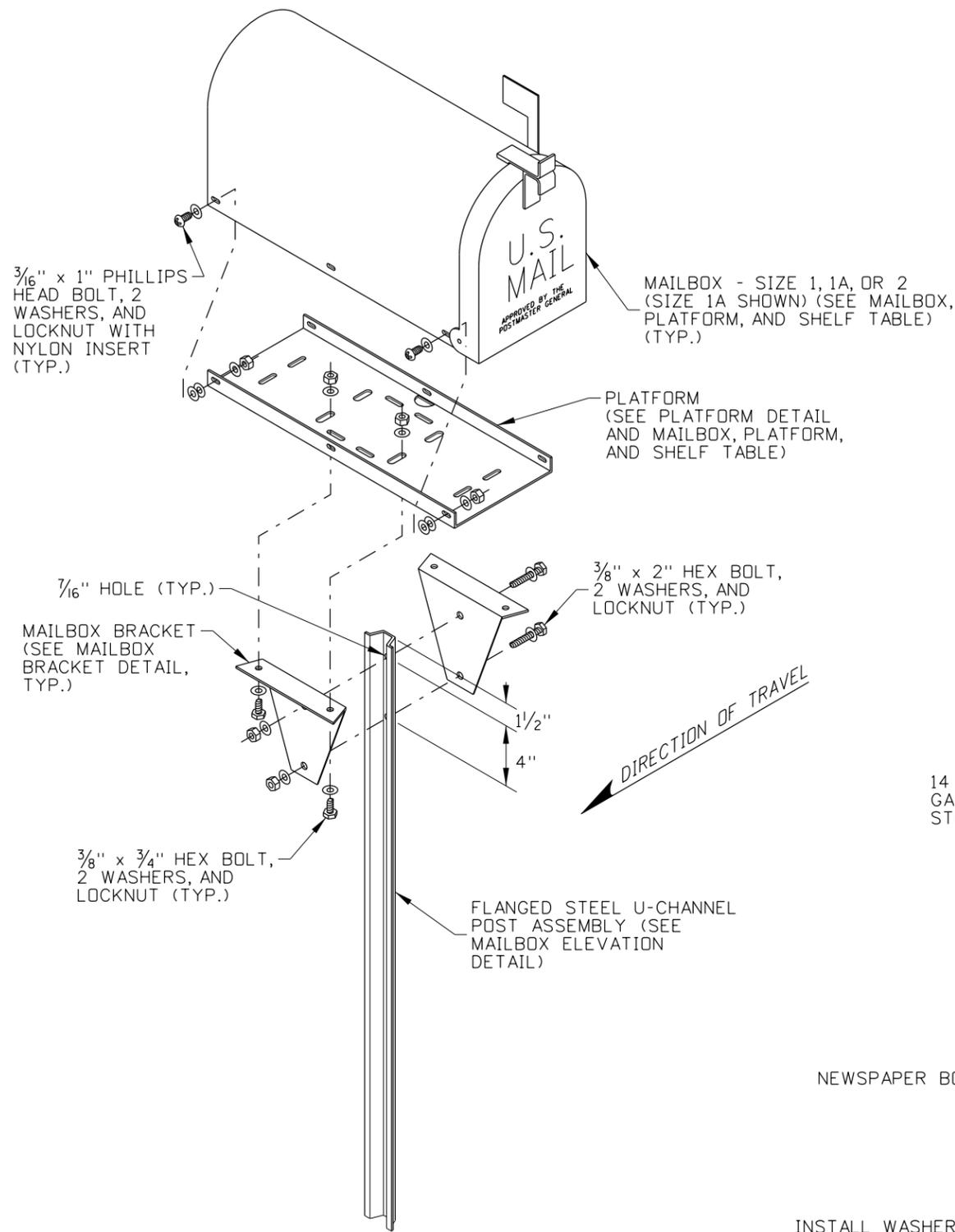
ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

**English**

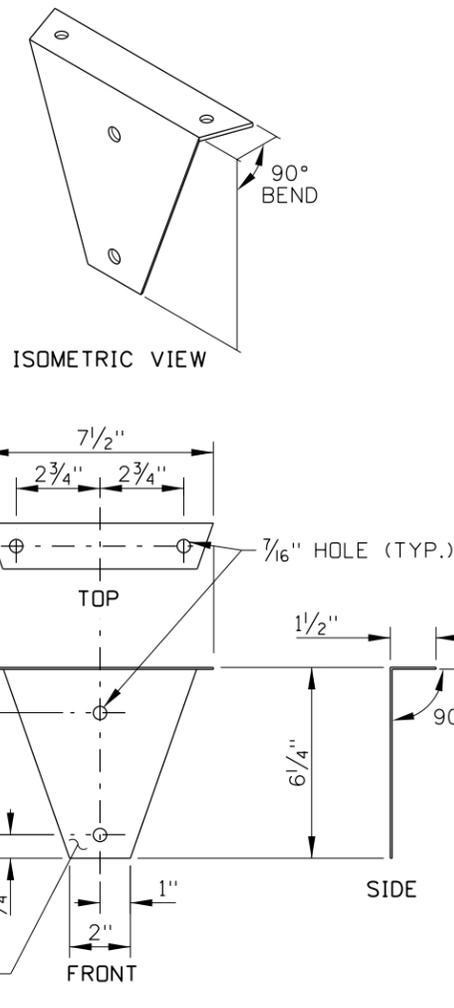
STANDARD DRAWING NO. **634-1**

SHEET 1 OF 5

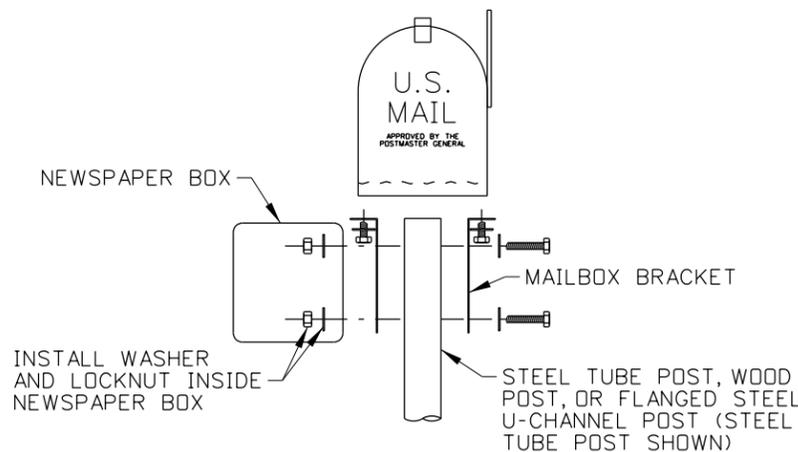




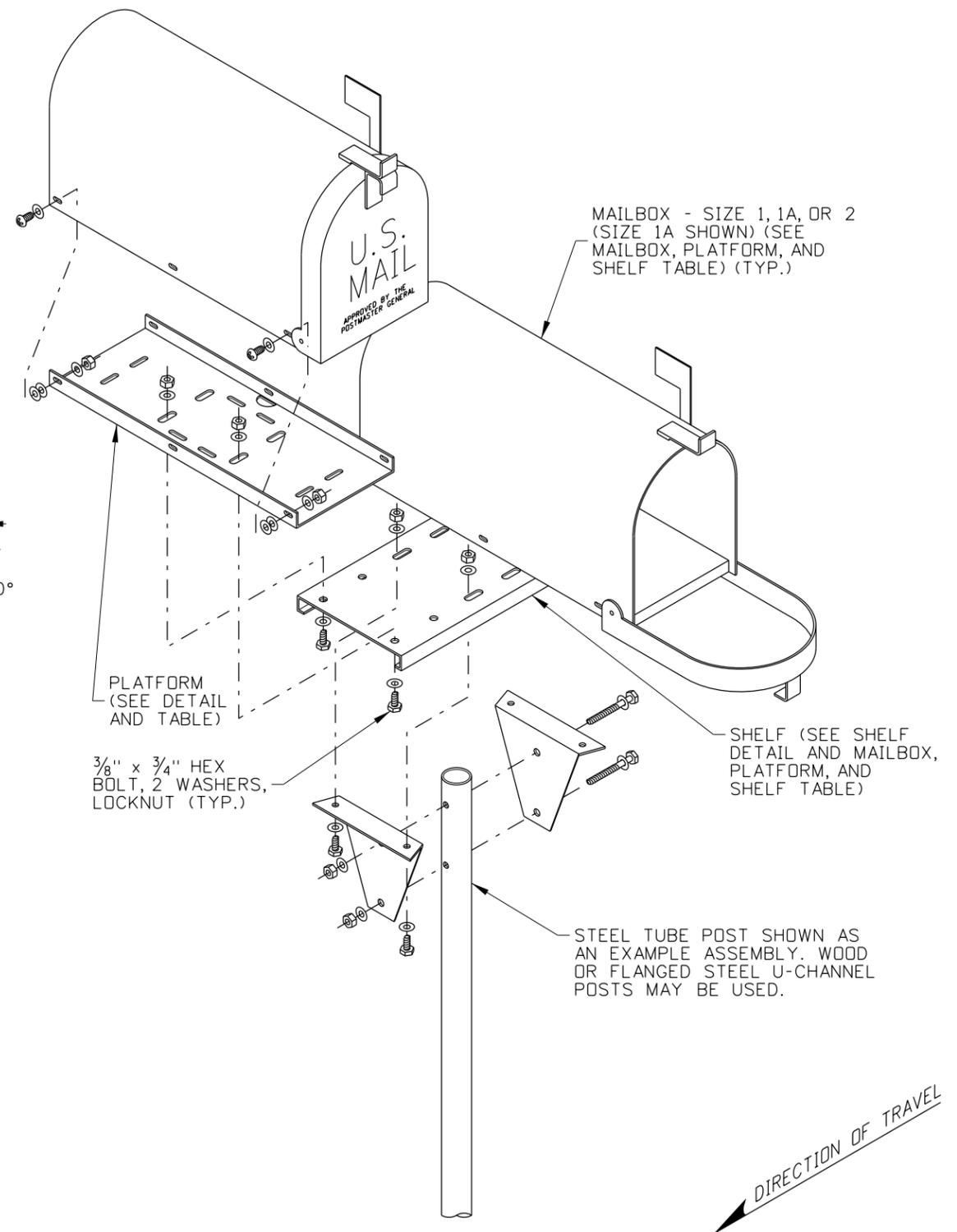
**TYPE A ASSEMBLY**  
FLANGED STEEL U-CHANNEL POST  
(2 LB/FT)



**MAILBOX BRACKET DETAIL**



**NEWSPAPER BOX DETAIL**  
TYPE A ASSEMBLY



**TYPE A ASSEMBLY**  
DOUBLE MAILBOX ASSEMBLY

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	7-92	MSM	6	7-10	MGL			
2	7-02	MSM	7	11-11	TEM			
3	7-05	MSM	8	01-13	RDL			
4	12-05	MSM						
5	10-08	JRV						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 634-1\_0113.dgn

DRAWING DATE: SEPTEMBER, 1993

**IDAHO TRANSPORTATION DEPARTMENT**

BOISE IDAHO



ORIGINAL SIGNED BY: LOREN THOMAS  
HIGHWAYS PROGRAM OVERSIGHT ENGINEER

ORIGINAL SIGNED BY: TOM COLE  
CHIEF ENGINEER

STANDARD DRAWING

**MAILBOXES**

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

**English**

STANDARD DRAWING NO. **634-1**

SHEET 2 OF 5

PROFESSIONAL ENGINEER

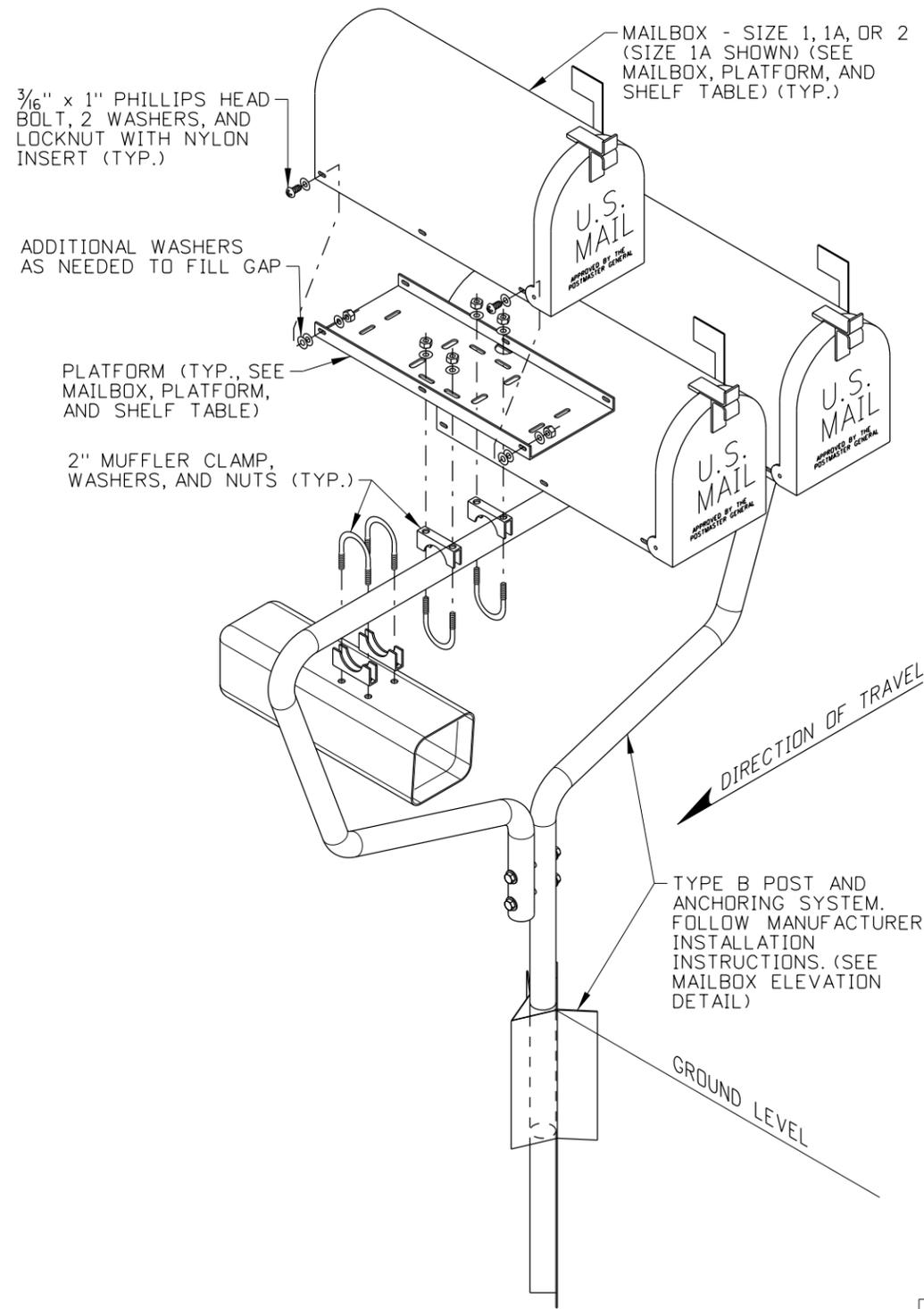
REGISTERED PROFESSIONAL ENGINEER

13683

JANUARY 31, 2004

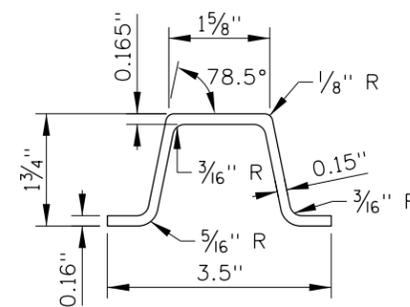
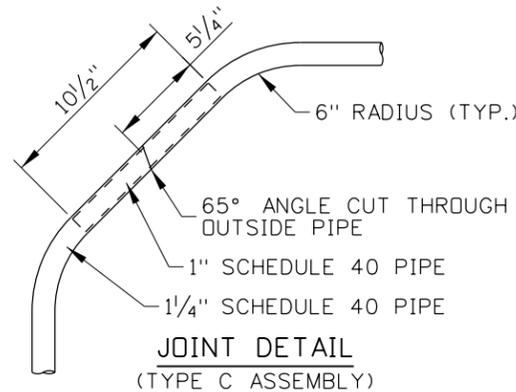
STATE OF IDAHO

**RYAN D. LANCASTER**



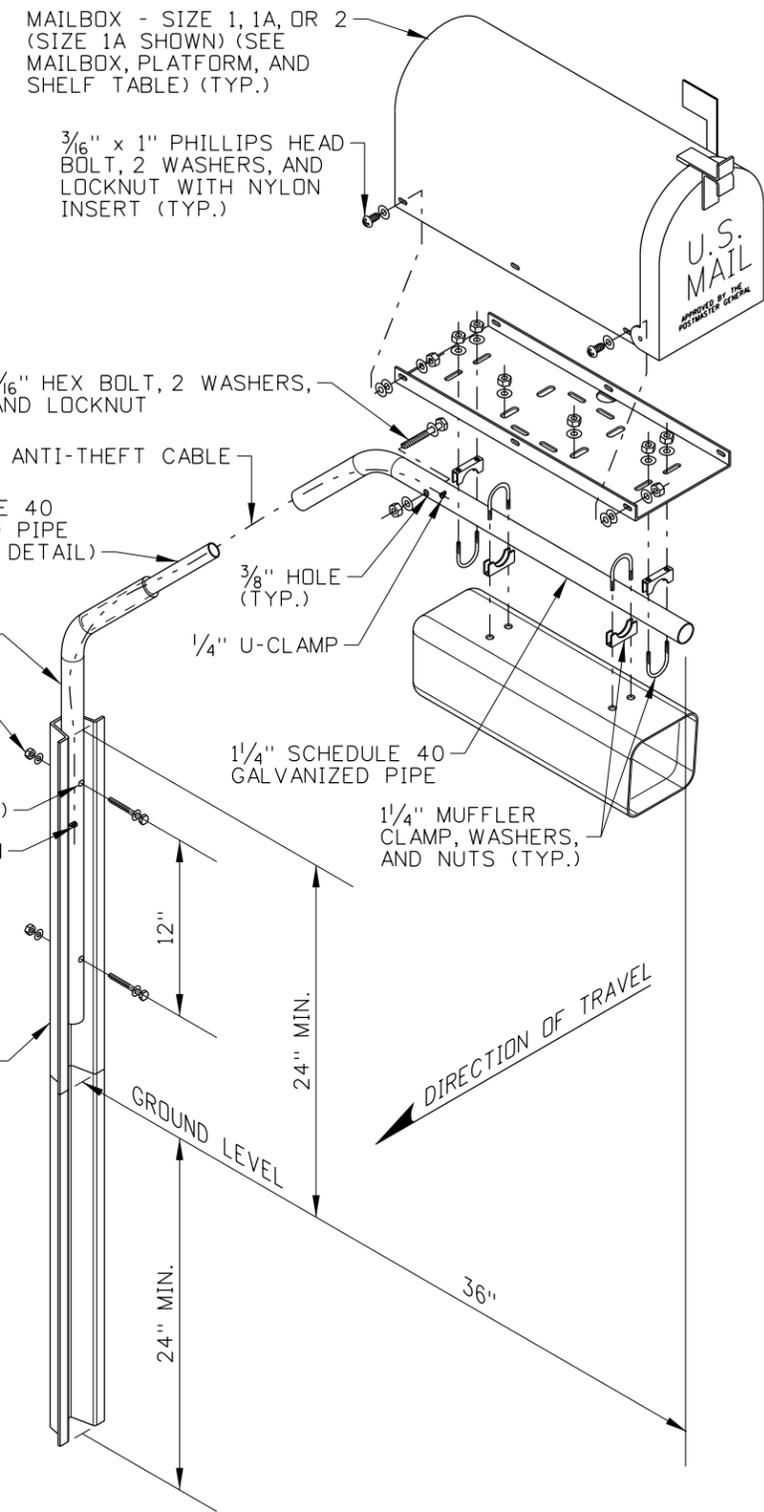
TYPE B ASSEMBLY

TYPE B ASSEMBLY FASTENERS TABLE			
SIZE & TYPE	QUANTITY	WASHERS	LOCKNUTS/NUTS
3/16" x 1" PHILLIPS HEAD BOLT (PER MAILBOX)	4 MIN.	8 MIN.	4 MIN.
2" MUFFLER CLAMP (PER MAILBOX)	2	4	4
2" MUFFLER CLAMP (PER NEWSPAPER BOX)	2	4	2
3/8" x 4 3/4" HEX BOLT (WOOD POST ONLY)	2	4	2
TYPE 2 POST AND ANCHORING SYSTEM	SEE MANUFACTURERS INSTALLATION INSTRUCTIONS		



FLANGED CHANNEL DETAIL (TYPE C ASSEMBLY)

TYPE C ASSEMBLY FASTENERS TABLE			
SIZE & TYPE	QUANTITY	WASHERS	LOCKNUTS/NUTS
3/16" x 1" PHILLIPS HEAD BOLT	4 MIN.	8 MIN.	4 MIN.
1 1/4" MUFFLER CLAMP	2	4	4
5/16" x 2" HEX BOLT	3	6	3
1/4" U-CLAMP	2	0	4



TYPE C ASSEMBLY

REVISIONS							
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE
1	7-92	MSM	6	7-10	MGL		
2	7-02	MSM	7	11-11	TEM		
3	7-05	MSM	8	01-13	RDL		
4	12-05	MSM					
5	10-08	JRV					

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 634-1\_0113.dgn

DRAWING DATE: SEPTEMBER, 1993

IDAHO TRANSPORTATION DEPARTMENT

BOISE IDAHO

ORIGINAL SIGNED BY: LOREN THOMAS  
HIGHWAYS PROGRAM OVERSIGHT ENGINEER

ORIGINAL SIGNED BY: TOM COLE  
CHIEF ENGINEER

STANDARD DRAWING

MAILBOXES

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

English

STANDARD DRAWING NO. 634-1

SHEET 3 OF 5

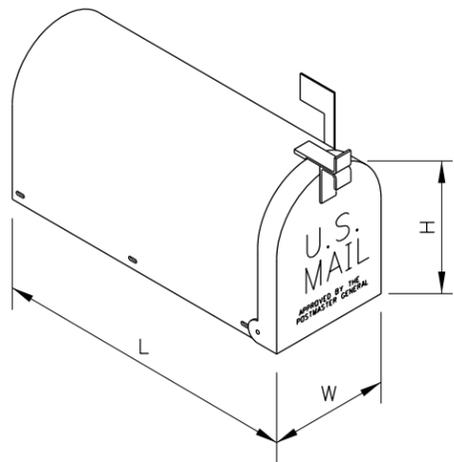
PROFESSIONAL ENGINEER

RYAN D. LANCASTER

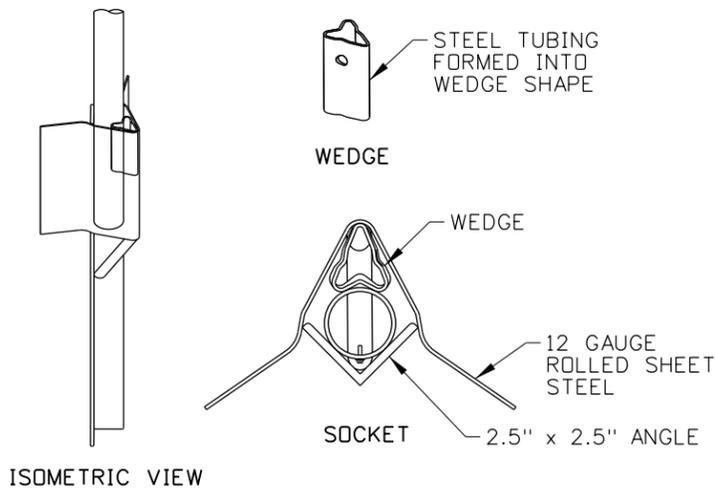
STATE OF IDAHO

13683

MAILBOX, PLATFORM, AND SHELF TABLE						
MAILBOX SIZE	MAILBOX DIMENSIONS			PLATFORM DIMENSION		SHELF DIM.
	L	W	H	L <sub>p</sub>	W <sub>p</sub>	L <sub>s</sub>
1	19"	6 1/2"	8 1/2"	17"	6"	15"
1-A	21"	8"	10 1/2"	19"	7 1/2"	16 1/2"
2	23 1/2"	11 1/2"	13 1/2"	21"	11"	20"

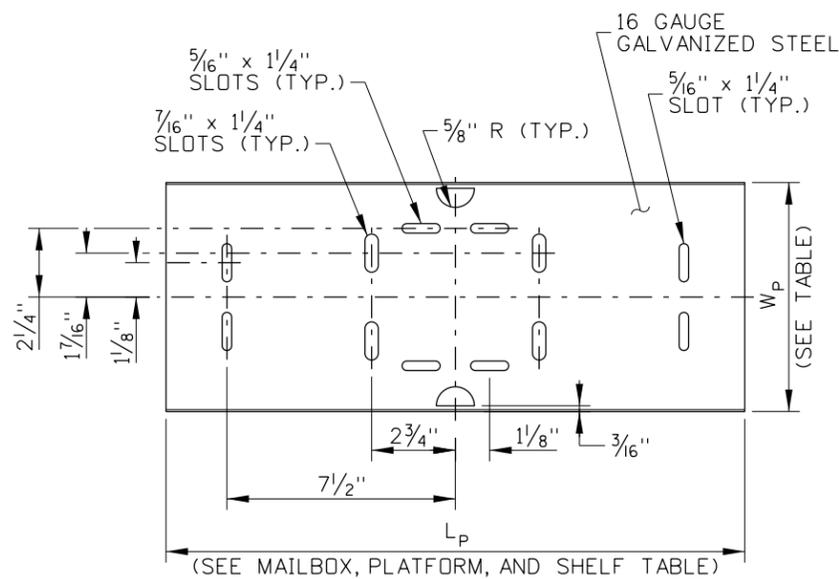


MAILBOX DIMENSIONS

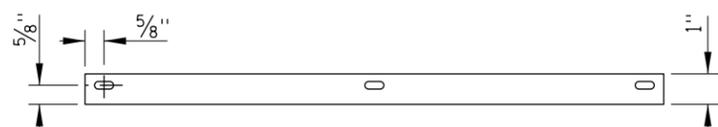


SOCKET AND WEDGE MAILBOX SUPPORT SYSTEM DETAIL

FOR USE WITH TYPE B ASSEMBLY  
MAY BE USED WITH TYPE A - STEEL TUBE POST ASSEMBLY  
(SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS)

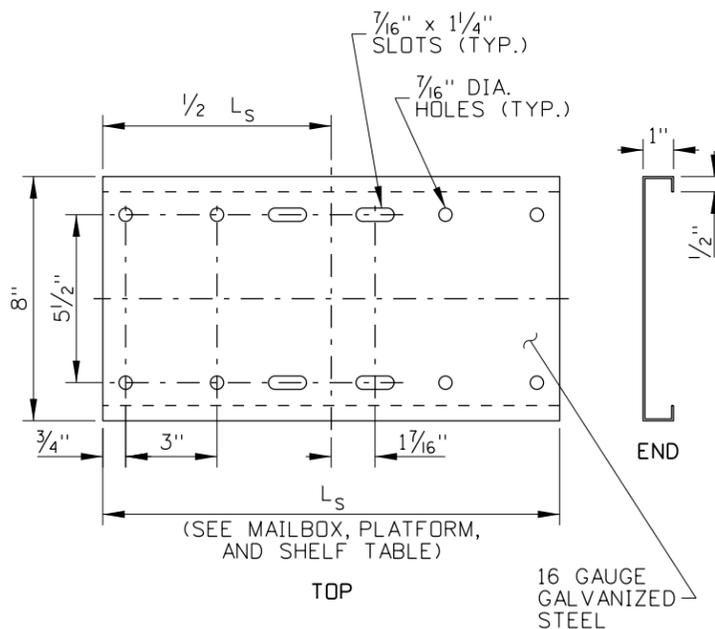


TOP



SIDE

PLATFORM DETAIL  
(ONE-PIECE)



SHELF DETAIL  
(FOR TYPE A DOUBLE MAILBOX ASSEMBLIES)

NOTES

1. CONSTRUCT MAILBOX ASSEMBLIES IN ACCORDANCE WITH SECTION 634 - MAILBOX OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
2. SEE STANDARD DRAWING 405-2 FOR MAILBOX PLACEMENT.
3. INSTALL THE MAILBOXES AND ASSEMBLIES WITH THE FASTENERS SHOWN IN THE ASSEMBLY FASTENER TABLES. SOME PLATFORM SLOTS AND HOLES MAY REMAIN UNUSED.
4. CENTER THE MAILBOX ON THE PLATFORM AND ENSURE THAT THE MAILBOX DOOR OPENS. SPACING OF MAILBOX MOUNTING HOLES MAY VARY BETWEEN MANUFACTURERS AND ADDITIONAL HOLES MAY BE DRILLED IN THE MAILBOX, PLATFORM, OR BOTH TO ATTACH THE MAILBOX TO THE PLATFORM.
5. COMMERCIALY AVAILABLE MAILBOXES AND MAILBOX ASSEMBLIES MAY BE SUBSTITUTED FOR THOSE SHOWN IF THEY MEET THE REQUIREMENTS OF THE U.S. POSTMASTER GENERAL AND HAVE SUCCESSFULLY PASSED THE TESTING REQUIREMENTS OF MASH OR NCHRP 350. ADJUSTABLE PLATFORM ALTERNATIVES AND THE SOCKET AND WEDGE MAILBOX SUPPORT SYSTEM ARE EXAMPLES OF COMMERCIALY AVAILABLE PROPRIETARY SYSTEMS THAT MAY BE ACCEPTABLE ALTERNATIVES. OBTAIN THE ENGINEER'S APPROVAL BEFORE INSTALLING ALTERNATIVE MAILBOXES OR ASSEMBLIES AND INSTALL IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.
6. USE AN ANTI-TWIST PLATE, SHOWN ON THE ANTI-TWIST PLATE DETAIL. A SOCKET AND WEDGE MAILBOX SUPPORT SYSTEM MAY BE USED IN LIEU OF AN ANTI-TWIST PLATE. IF THE SOCKET AND WEDGE SYSTEM IS USED, FOLLOW THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
7. THE TYPE C ASSEMBLY SHOULD BE USED IN HEAVY SNOW AREAS OR AREAS WHERE SNOW PLOW DAMAGE TO MAILBOXES HAS BEEN OBSERVED OR IS ANTICIPATED.
8. WHEN USED IN HEAVY SNOW AREAS, ONLY ONE MAILBOX IS RECOMMENDED FOR TYPE A ASSEMBLIES. THE TYPE A ASSEMBLY WITH WOOD POSTS IS RECOMMENDED FOR USE IN HEAVY SNOW AREAS. A SNOW SHIELD MAY BE INSTALLED AS SHOWN ON STANDARD DRAWING 634-2.
9. MAILBOX SIZES 1, 1A, AND 2, SHOWN IN THE MAILBOX, PLATFORM, AND SHELF TABLE MAY BE INSTALLED ON THE TYPE A DOUBLE MAILBOX ASSEMBLY IN ANY COMBINATION OF SIZES. WHEN MORE THAN ONE SIZE IS TO BE INSTALLED, USE THE SHELF SIZE FOR THE LARGER MAILBOX.
10. THE TYPE B ASSEMBLY IS A PROPRIETARY SYSTEM THAT MAY BE USED FOR THE INSTALLATION OF TWO OR MORE MAILBOXES. ON TYPE B MAILBOX ASSEMBLIES, INSTALL A MAXIMUM OF FIVE SIZE 1 MAILBOXES, FOUR SIZE 1A MAILBOXES, OR THREE SIZE 2 MAILBOXES. WHEN MORE THAN ONE SIZE IS TO BE INSTALLED, LIMIT THE NUMBER OF MAILBOXES TO THE MAXIMUM NUMBER FOR THE LARGEST SIZE USED.
11. DO NOT INSTALL THE MAILBOX ASSEMBLY IN A CONCRETE FOUNDATION. AN EXCEPTION MAY BE MADE FOR MASH OR NCHRP 350 APPROVED ALTERNATIVE MAILBOX ASSEMBLIES IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
12. ENSURE THAT PLATFORM, SHELF, AND BRACKETS ARE GALVANIZED IN ACCORDANCE WITH AASHTO M 232.
13. IF USED, ATTACH THE NEWSPAPER BOX TO THE SUPPORT, DIRECTLY UNDER THE MAILBOX. ENSURE THAT NEWSPAPER BOXES DO NOT EXTEND BEYOND THE FRONT OF THE MAILBOX WHEN THE MAILBOX DOOR IS CLOSED. IN HEAVY SNOW AREAS, LOCATE THE NEWSPAPER BOX ON THE TRAILING SIDE OF THE MAILBOX POST. SEE THE NEWSPAPER BOX DETAIL FOR INSTALLATIONS ON TYPE A MAILBOX ASSEMBLIES.
14. ROUND OR GRIND THE CORNERS OF PLATFORMS, SHELVES, BRACKETS, OR OTHER HARDWARE THAT HAS SHARP PROTRUDING EDGES.
15. NOT TO SCALE.

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	7-92	MSM	6	7-10	MGL			
2	7-02	MSM	7	11-11	TEM			
3	7-05	MSM	8	01-13	RDL			
4	12-05	MSM						
5	10-08	JRV						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
CADD FILE NAME: 634-1\_0113.dgn  
DRAWING DATE: SEPTEMBER, 1993

IDAHO  
TRANSPORTATION  
DEPARTMENT



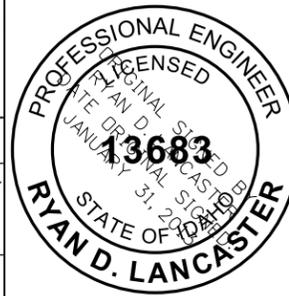
BOISE IDAHO

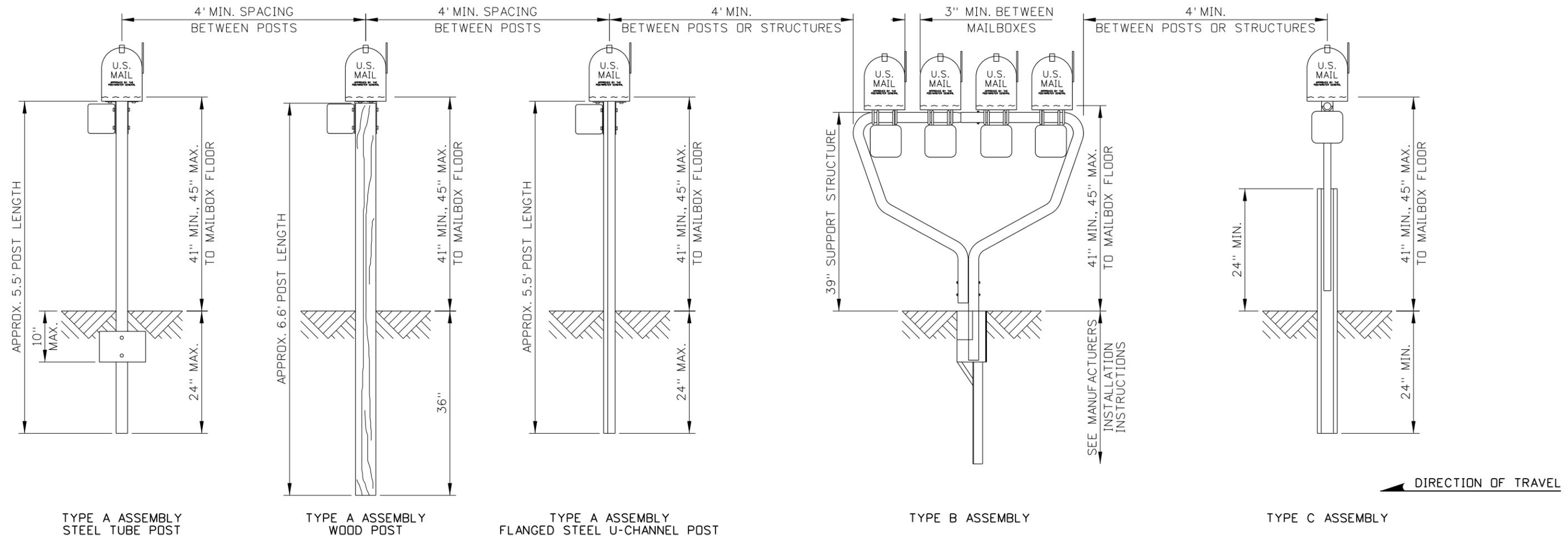
ORIGINAL SIGNED BY: LOREN THOMAS  
HIGHWAYS PROGRAM OVERSIGHT ENGINEER  
ORIGINAL SIGNED BY: TOM COLE  
CHIEF ENGINEER

STANDARD DRAWING  
MAILBOXES

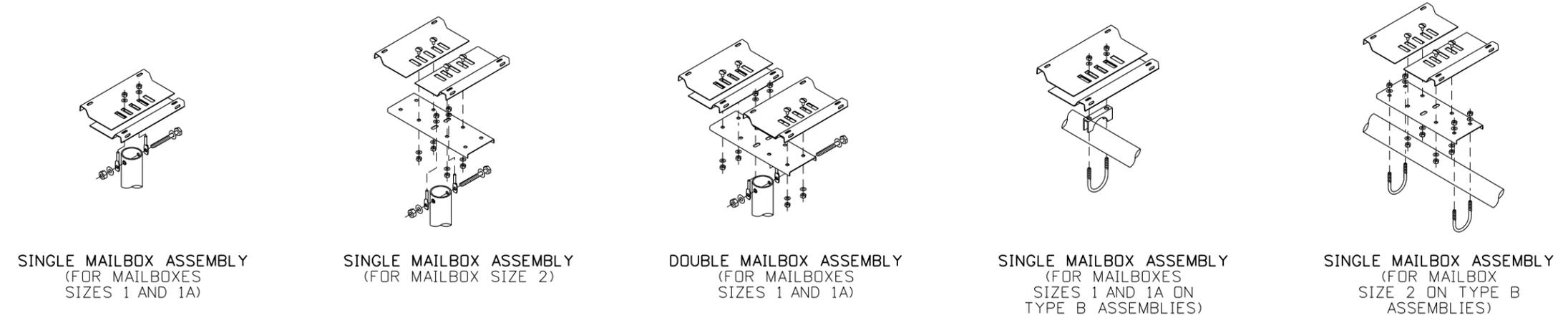
English  
STANDARD DRAWING NO.  
634-1  
SHEET 4 OF 5

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho





MAILBOX ELEVATION DETAIL



ADJUSTABLE PLATFORM ALTERNATIVES

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	7-92	MSM	6	7-10	MGL			
2	7-02	MSM	7	11-11	TEM			
3	7-05	MSM	8	01-13	RDL			
4	12-05	MSM						
5	10-08	JRV						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 634-1\_0113.dgn

DRAWING DATE: SEPTEMBER, 1993

IDAHO TRANSPORTATION DEPARTMENT

BOISE IDAHO

ORIGINAL SIGNED BY: LOREN THOMAS  
HIGHWAYS PROGRAM OVERSIGHT ENGINEER

ORIGINAL SIGNED BY: TOM COLE  
CHIEF ENGINEER

STANDARD DRAWING

MAILBOXES

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

English

STANDARD DRAWING NO. 634-1

SHEET 5 OF 5

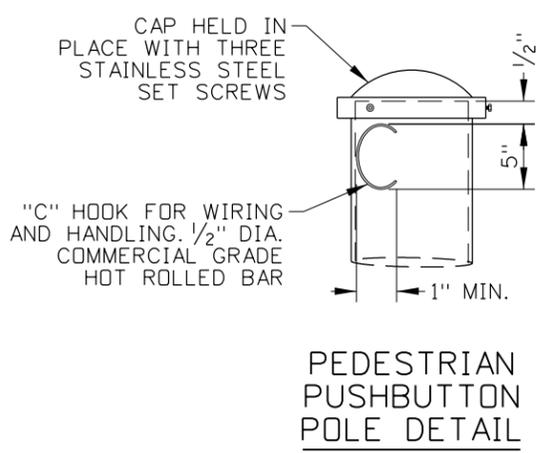
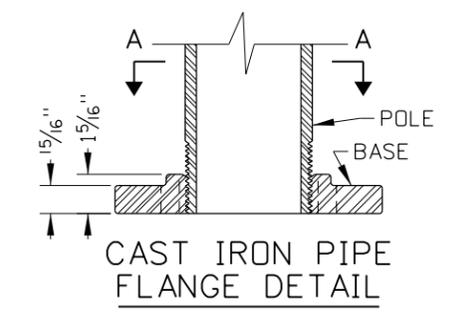
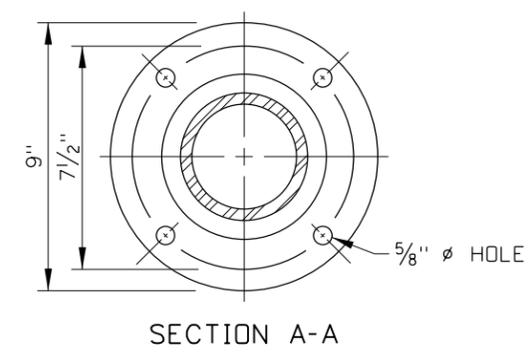
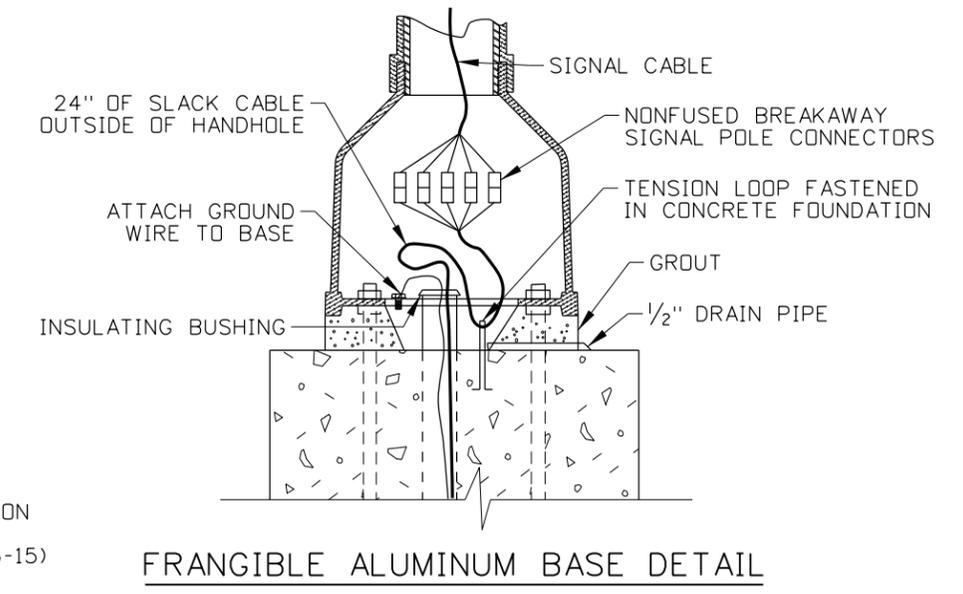
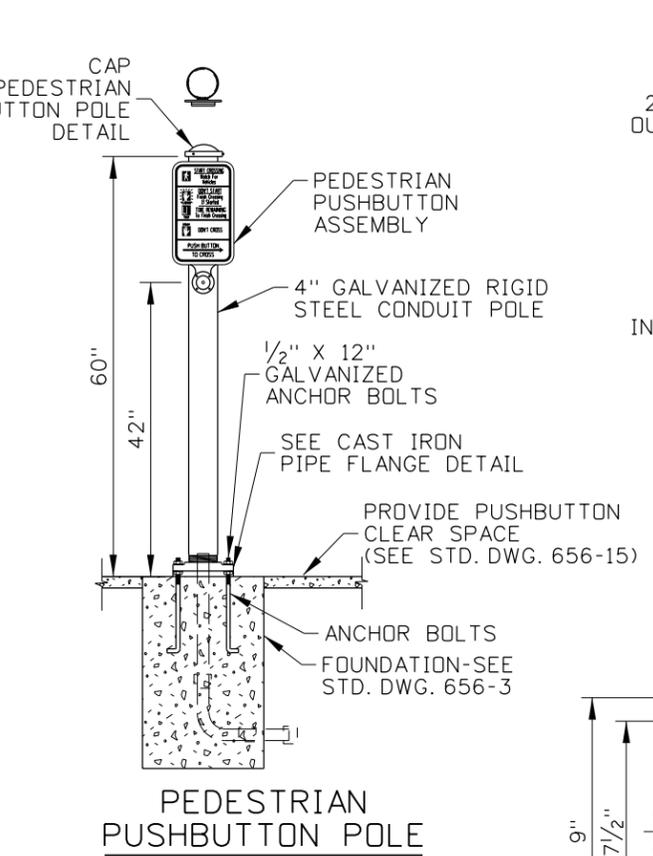
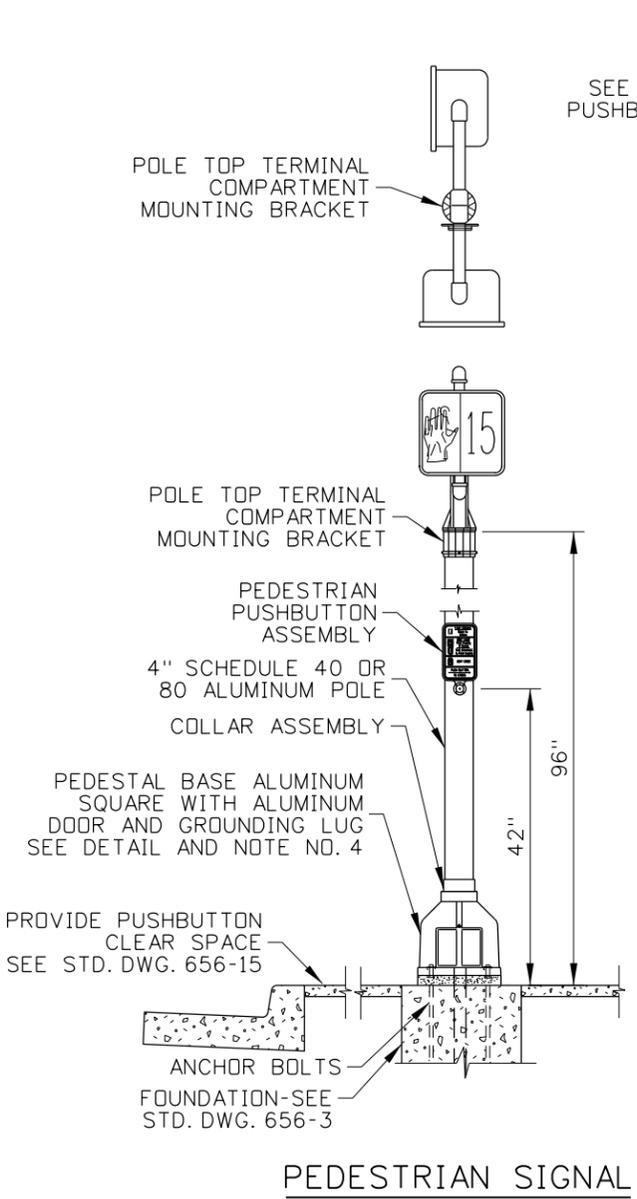
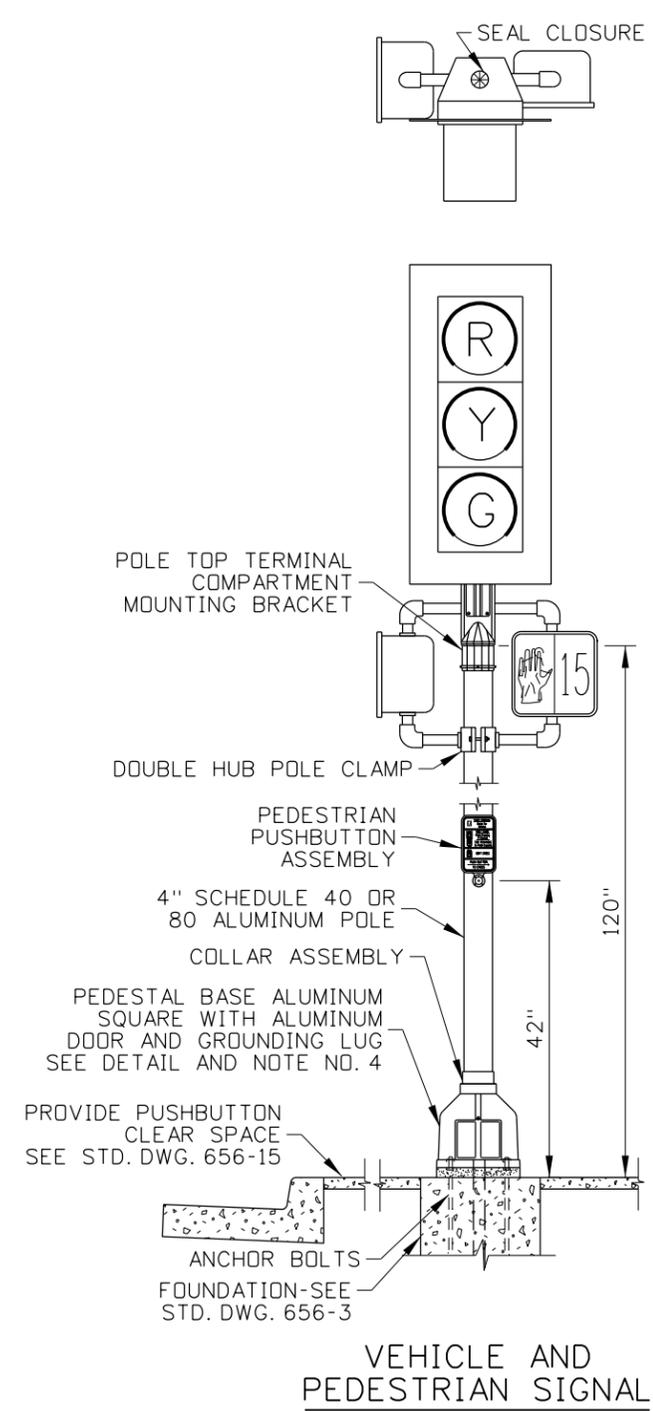
PROFESSIONAL ENGINEER

RYAN D. LANCASTER

STATE OF IDAHO

13683





- NOTES**
1. THIS DRAWING SHOWS TYPICAL SIGNAL INSTALLATION DETAILS. THE DETAILS FOR COMPONENTS FROM DIFFERENT SUPPLIERS AND FOR QPL APPROVED PROPRIETARY SYSTEMS MAY VARY.
  2. LOCATE POLES AS SHOWN IN THE PLANS AND IN ACCORDANCE WITH STANDARD DRAWING 656-15.
  3. ORIENT SIGNAL COMPONENTS AS SHOWN UNLESS OTHERWISE SHOWN ON PLANS.
  4. USE STEEL CONDUIT TO EXTEND CONDUIT BEYOND CONCRETE FOUNDATION AND STEEL CONDUIT ELBOWS IN THE FOUNDATION.
  5. TERMINATE SPARE STUB OUTS WITH A STEEL COUPLING AND PLASTIC PUSH PLUG AT BOTH ENDS.
  6. A FRANGIBLE COUPLING SYSTEM BASE CAN BE SUBSTITUTED FOR A FRANGIBLE CAST ALUMINUM BASE.
  7. LEVEL SIGNAL COMPONENTS AFTER THE POLE HAS BEEN PLUMBED.
  8. DRAWING NOT TO SCALE.

REVISIONS							
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE
1	12-94	HEB	6	04-14	HEB		
2	08-06	NQB	7	12-16	HEB		
3	12-07	HEB	8	03-20	RDL		
4	07-09	HEB	9	02-22	RDL		
5	07-10	HEB					

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 656-2\_0422.dgn

DRAWING DATE: AUGUST, 1994

**IDAHO TRANSPORTATION DEPARTMENT**



BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN  
DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING

**FRANGIBLE BASE TRAFFIC SIGNAL POLES**

REQUIRES STD. DWG. 656-3 AND 656-15

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

**English**

STANDARD DRAWING NO. **656-2**

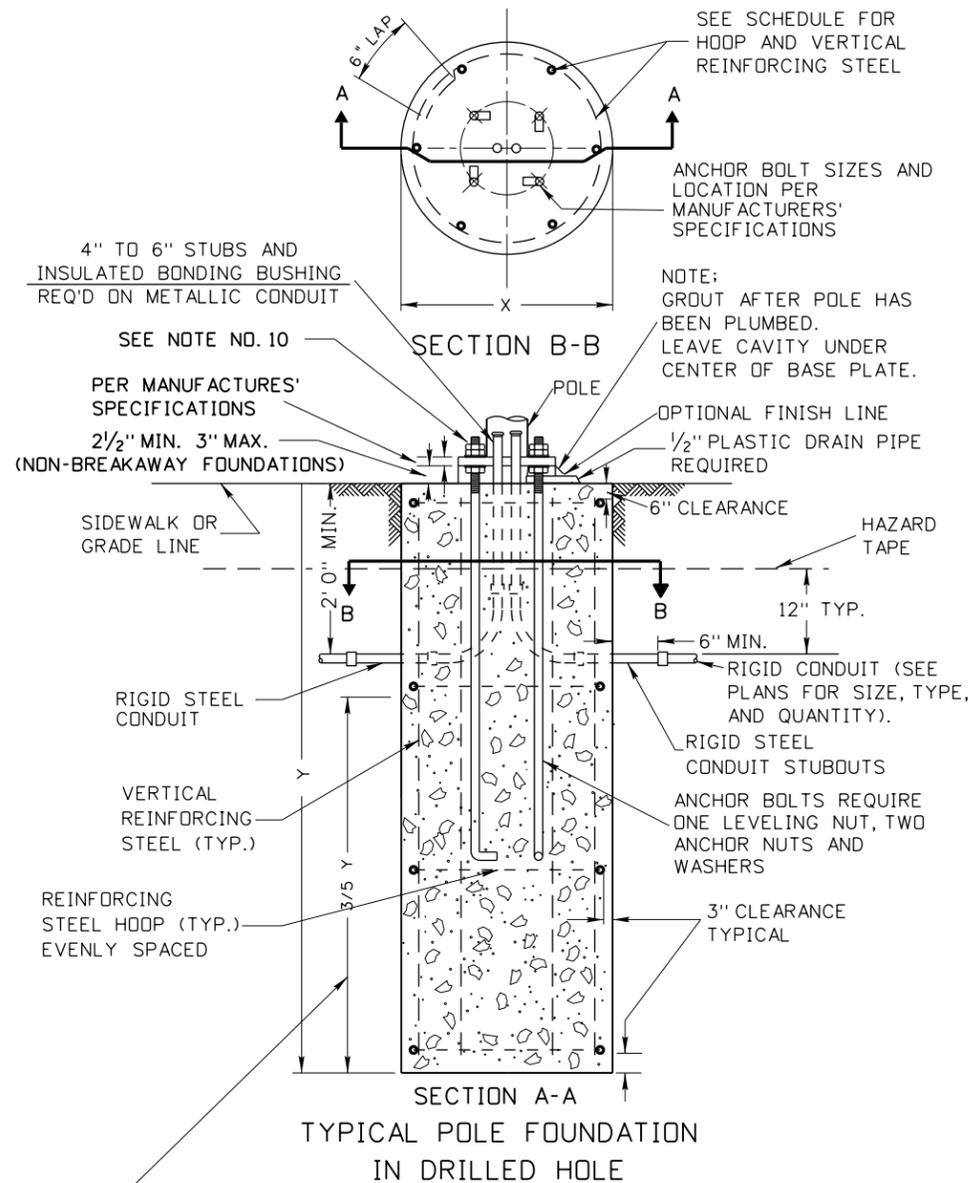
SHEET 1 OF 1

PROFESSIONAL ENGINEER

RYAN D. LANCASTER

13683

STATE OF IDAHO



4" TO 6" STUBS AND INSULATED BONDING BUSHING REQ'D ON METALLIC CONDUIT

SEE SCHEDULE FOR HOOP AND VERTICAL REINFORCING STEEL

ANCHOR BOLT SIZES AND LOCATION PER MANUFACTURERS' SPECIFICATIONS

NOTE: GROUT AFTER POLE HAS BEEN PLUMBED. LEAVE CAVITY UNDER CENTER OF BASE PLATE.

OPTIONAL FINISH LINE 1/2" PLASTIC DRAIN PIPE REQUIRED

SEE NOTE NO. 10

PER MANUFACTURERS' SPECIFICATIONS

2 1/2" MIN. 3" MAX. (NON-BREAKAWAY FOUNDATIONS)

SIDEWALK OR GRADE LINE

RIGID STEEL CONDUIT

VERTICAL REINFORCING STEEL (TYP.)

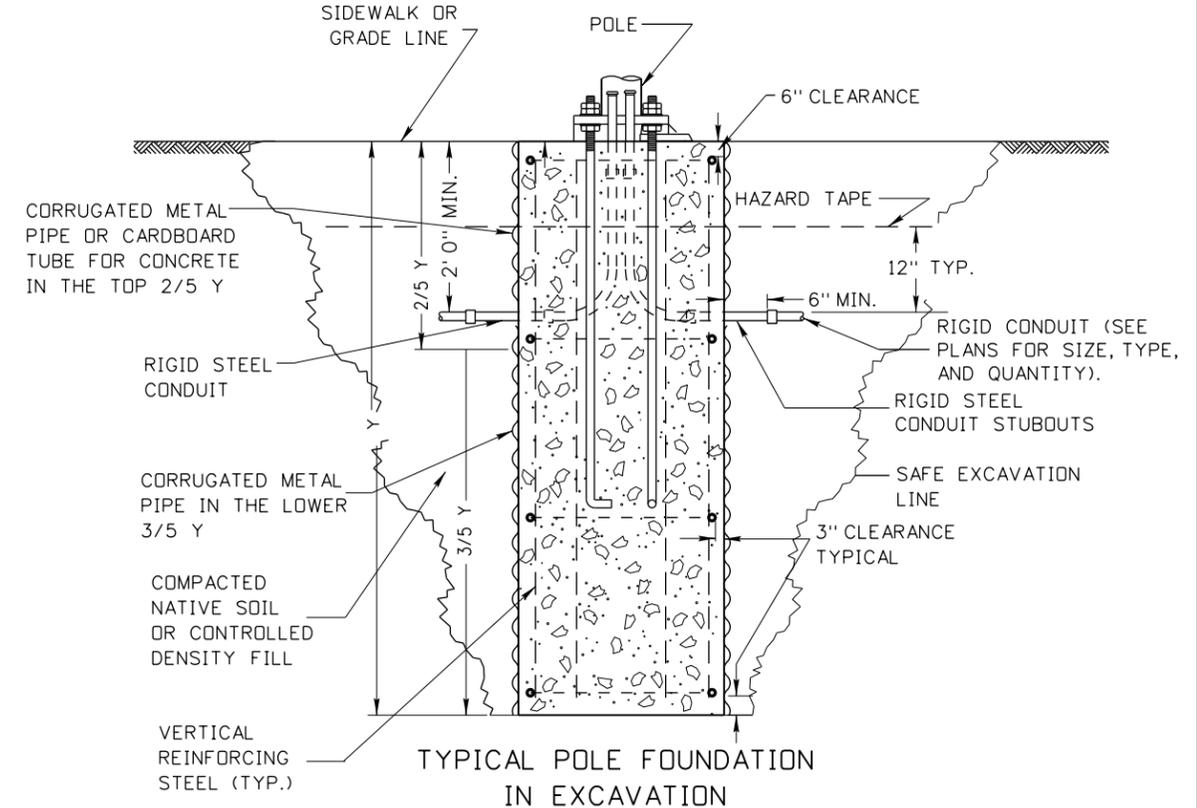
REINFORCING STEEL HOOP (TYP.) EVENLY SPACED

TYPICAL POLE FOUNDATION IN DRILLED HOLE

THE LOWER 3/5 OF THE FOUNDATION TO BE PLACED AGAINST UNDISTURBED SOIL UNLESS OTHERWISE APPROVED BY THE ENGINEER. THE UPPER 2/5 OF THE FOUNDATION MAY BE FORMED AS NEEDED.

GENERAL NOTES:

1. THE FOUNDATIONS SHALL BE LOCATED AS INDICATED ON THE PROJECT PLAN SHEETS.
2. FOUNDATION REINFORCING STEEL CAGES MAY BE WELDED IF THE REINFORCING STEEL CONFORMS TO AASHTO M 31 AND ALL WELDING CONFORMS TO ANSI/AWS D1.4 (STRUCTURAL WELDING CODE - REINFORCING STEEL).
3. REINFORCING STEEL IN POLE FOUNDATIONS SHALL BE 60 KSI STEEL.
4. STEEL TEMPLATE REQUIRED FOR ANCHOR BOLT PLACEMENT.
5. SPARE STUBOUTS WHEN SHOWN ON PLAN SHEETS SHALL BE TERMINATED WITH A STEEL COUPLING AND FOAM PLUG AT BOTH ENDS.
6. CLASS 40A CONCRETE SHALL BE USED IN POLE FOUNDATIONS.
7. FOUNDATION CONCRETE SHALL ACHIEVE 100% STRENGTH AND CURE FOR A MINIMUM OF 7 DAYS BEFORE ANY LOADING IS APPLIED.
8. FILLER JOINT MATERIAL WILL BE PLACED AROUND POLE FOUNDATION WHEN POLE FOUNDATION IS IN CONTACT WITH SIDEWALK.
9. ELEVATION OF TOP OF POLE FOUNDATION SHALL MATCH THE ADJACENT PAVEMENT EDGE OR SIDEWALK ELEVATION.
10. ANCHOR BASE ASSEMBLIES SHALL BE INSTALLED AND TIGHTENED IN ACCORDANCE WITH SUBSECTION 619.03 OF THE ITD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND THE SUPPLEMENTAL SPECIFICATIONS.
11. DRAWING NOT TO SCALE.



EXCAVATION NOTES:

1. IF CORRUGATED METAL PIPE IS USED UP TO SIDEWALK OR GRADE LINE, CUT OUT HOLE FOR THE CONDUITS WILL BE EQUAL TO THE DIAMETER OF CONDUIT OR CONDUITS PLUS ONE INCH.
2. WHEN NATIVE SOIL IS USED FOR BACKFILL, IT SHALL BE COMPACTED IN ACCORDANCE WITH SUBSECTION 210.03 OF THE IDAHO STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND SUPPLEMENTAL SPECIFICATIONS.
3. IF CONTROL DENSITY FILL IS USED FOR BACK FILL, IT SHALL HAVE A COMPRESSIVE STRENGTH OF 100 PSI TO 300 PSI.
4. DRAWING NOT TO SCALE.

POLE FOUNDATION SCHEDULE												
POLE TYPE	MT.HT.	MASTARM LENGTH	FOUNDATION TYPE	X	Y	REINFORCING STEEL HOOPS			VERTICAL REINFORCING STEEL		CUBIC YARDS CONCRETE	
						QTY.	SIZE	LIN.FT.	QTY.	SIZE		LIN.FT.
PEDESTRIAN SIGNAL POLE	-	-	A	2'-0"	5'-0"	4	#4	20'-10"	6	#4	25'-6"	.6
SIGNAL POLE	-	20' - 45'	D	3'-0"	9'-0"	5	#4	41'-10"	8	#6	66'-0"	2.4
PEDESTRIAN PUSHBUTTON POLE	4'-0"	-	E	1'-6"	2'-6"	-	-	-	-	-	-	0.2
DUAL MAST ARM SIGNAL POLE	-	ALL	F	3'-0"	12'-0"	8	#5	66'-10"	12	#6	135'-0"	3.1
SIGNAL POLE	-	50' - 55'	F	3'-0"	12'-0"	8	#5	66'-10"	12	#6	135'-0"	3.1

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME: 656-3\_0517.dgn  
 DRAWING DATE: MAY, 2017

**IDAHO TRANSPORTATION DEPARTMENT**



BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN  
 DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING  
**MASTARM SIGNAL POLE AND PEDESTRIAN POLE FOUNDATION DETAILS**  
 REQUIRES SHEET 2 OF 2

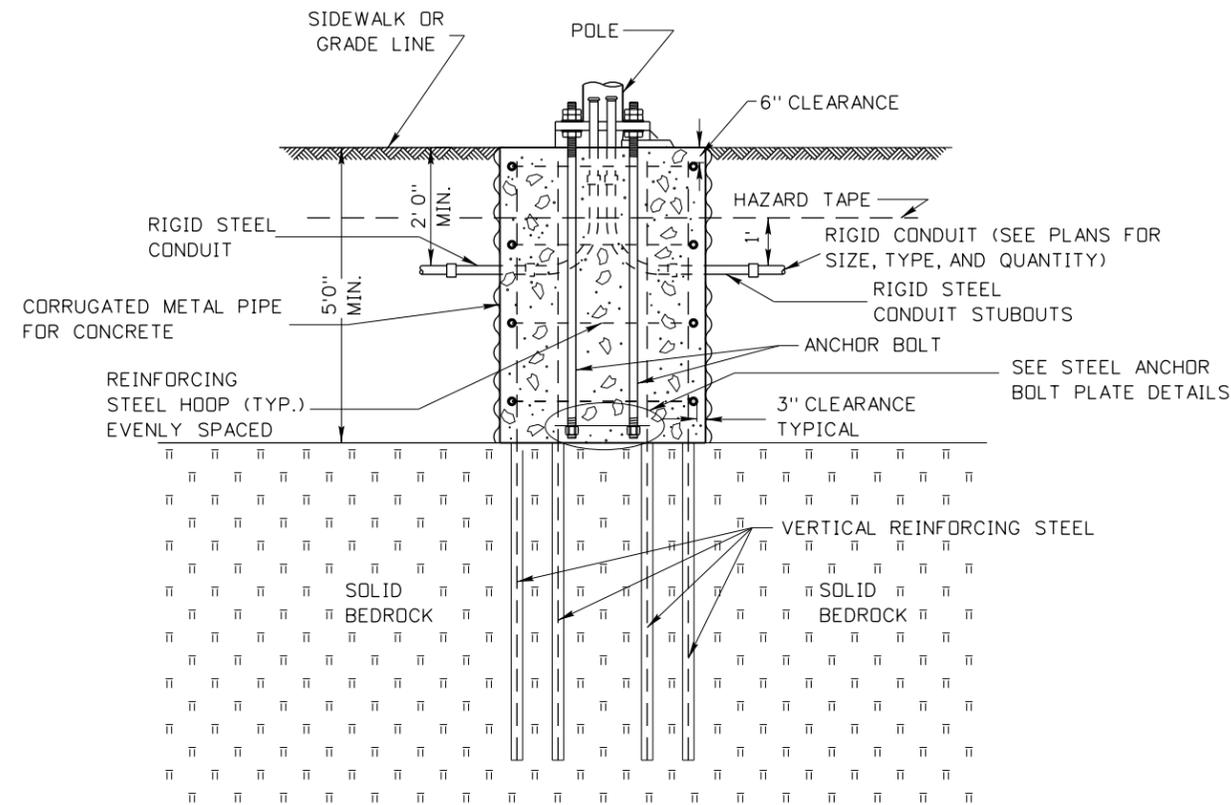
ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

**English**

STANDARD DRAWING NO. **656-3**

SHEET 1 OF 2

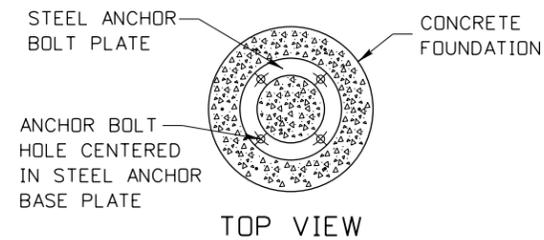
ORIGINAL SIGNED BY: TRI BUJ  
 DATE ORIGINAL SIGNED: MAY 1, 2017



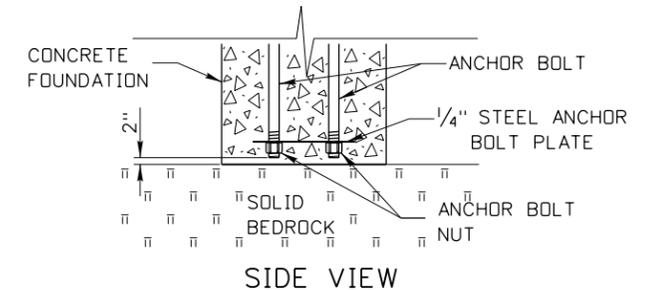
TYPICAL POLE FOUNDATION  
IN SOLID BEDROCK

SOLID BEDROCK NOTES:

1. IF DEPTH TO BEDROCK IS LESS THAN 5', NOTIFY THE ENGINEER AND REDESIGN OF THE FOUNDATION MAY BE REQUIRED
2. FOUR REINFORCING STEEL HOOPS TO BE EVENLY SPACED ARE REQUIRED.
3. SOCKET ALL VERTICAL REINFORCING STEEL FULL LENGTH AS SHOWN IN POLE FOUNDATION SCHEDULE ON SHEET 1 IN BEDROCK. DIAMETERS OF DRILLED HOLES FOR VERTICAL REINFORCING STEEL SHALL BE AT LEAST 2 INCHES. FILL DRILLED HOLES WITH GROUT, 705.02, TYPE B, CLASS 1.
4. EXCAVATION NOTES ON SHEET 1 APPLY TO THIS APPLICATION.
5. DRAWING NOT TO SCALE.



ANCHOR BOLT PLATE SCHEDULE		
BOLT CIRCLE	OUTSIDE DIAMETER	INSIDE DIAMETER
17 1/2"	21 1/4"	13 3/4"
18 1/2"	22 1/4"	14 3/4"
22"	26 1/4"	17 3/4"



STEEL ANCHOR BOLT PLATE DETAILS

SEE STANDARD DRAWING 656-3 SHEET 1 FOR DETAILS

ORIGINAL STORED  
AT: ITD,  
Headquarters  
3311 West State  
Boise, Idaho

ORIGINAL SIGNED BY:  
TRI BUJ  
DATE ORIGINAL SIGNED:  
MAY 1, 2017

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY

SCALES SHOWN  
ARE FOR 11" X 17"  
PRINTS ONLY

CADD FILE NAME:  
656-3\_0517.dgn

DRAWING DATE:  
MAY, 2017

**IDAHO  
TRANSPORTATION  
DEPARTMENT**

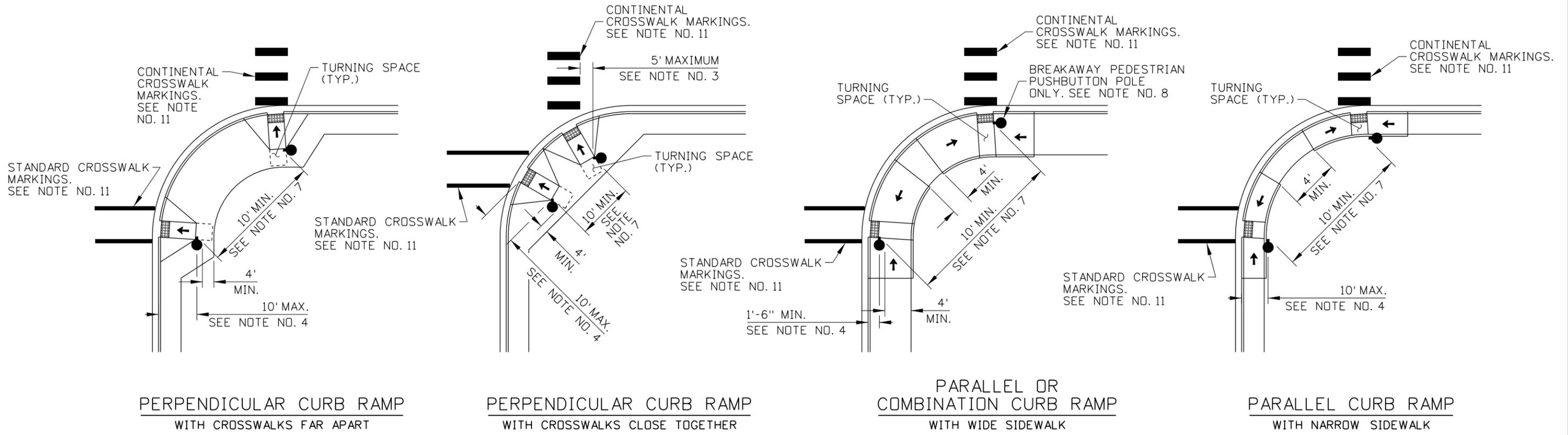


BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN  
DESIGN/TRAFFIC SERVICES ENGINEER

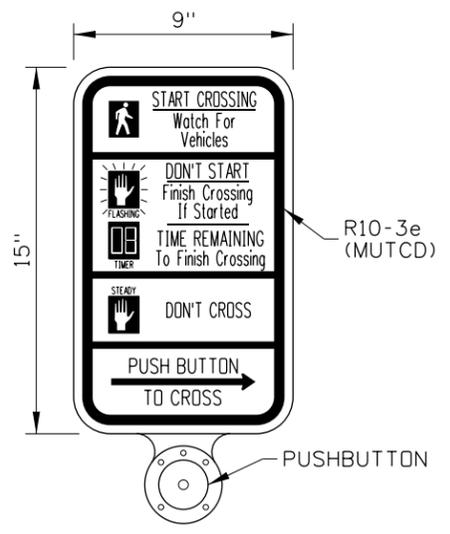
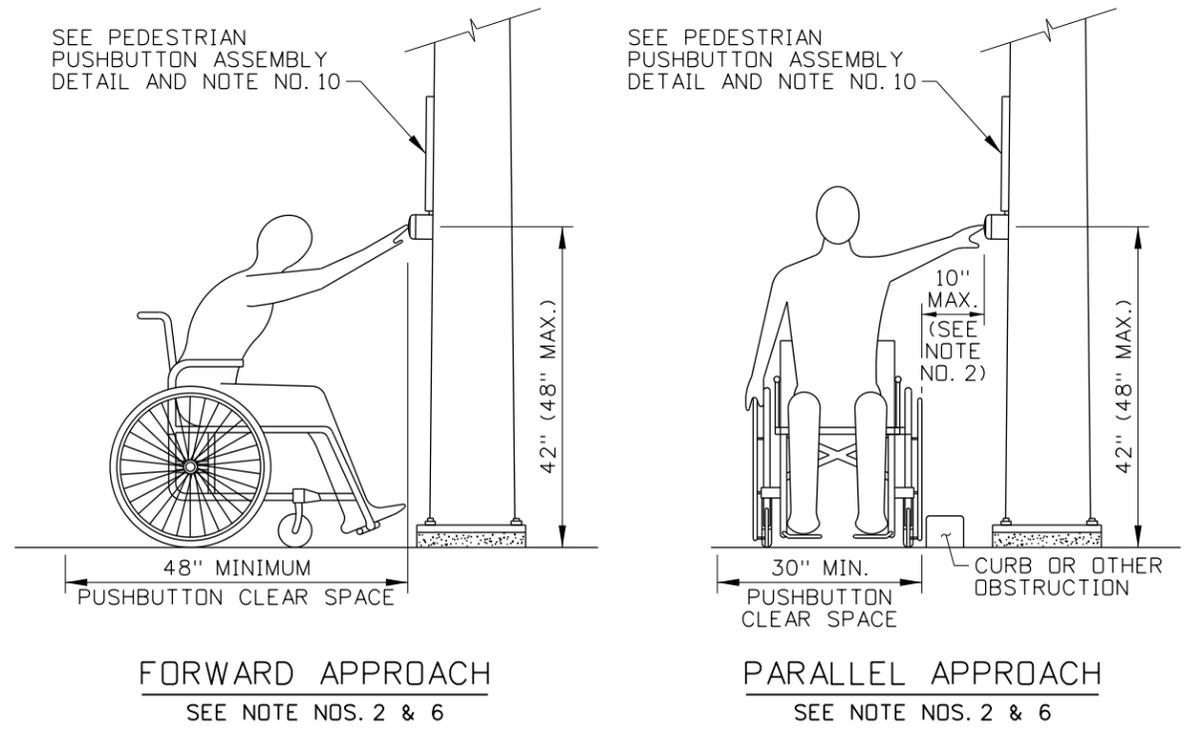
STANDARD DRAWING  
**MASTARM SIGNAL POLE  
AND PEDESTRIAN  
POLE FOUNDATION DETAILS**  
REQUIRES SHEET 1 OF 2

**English**  
STANDARD DRAWING NO.  
**656-3**  
SHEET 2 OF 2



**NOTES**

- FOUR TYPICAL CONFIGURATIONS ARE SHOWN. FOR OTHER CONFIGURATIONS, THE MAXIMUM AND MINIMUM DIMENSIONS SHOWN REMAIN APPLICABLE. WHERE CURB AND CURB RAMPS ARE NOT PRESENT, MEASURE FROM THE EDGE OF TRAVELED WAY.
- PROVIDE A PUSHBUTTON CLEAR SPACE, WITH 30" BY 48" MINIMUM DIMENSIONS, ADJACENT TO PEDESTRIAN PUSHBUTTONS. ENSURE THAT THE CLEAR SPACE SURFACE IS FIRM, STABLE, AND SLIP RESISTANT. POSITION THE CLEAR SPACE SO THE PUSHBUTTON CAN BE ACCESSED WITH EITHER A FORWARD OR PARALLEL APPROACH. AN OBSTRUCTION, UP TO 10" IN DEPTH, BETWEEN THE CLEAR SPACE AND THE PUSHBUTTON IS PERMITTED FOR A PARALLEL APPROACH. WHERE CURB RAMPS ARE USED, THE TURNING SPACE FOR THE CURB RAMP MAY DOUBLE AS THE CLEAR SPACE.
- PLACE PUSHBUTTON BETWEEN THE EDGE OF THE CROSSWALK LINE (EXTENDED) FARTHEST FROM THE CENTER OF THE INTERSECTION AND THE SIDE OF A CURB RAMP (IF PRESENT), BUT NOT MORE THAN 5' FROM THE SAID CROSSWALK LINE.
- PLACE PUSHBUTTON BEHIND THE FACE OF CURB OR OUTSIDE THE EDGE OF TRAVELED WAY A MINIMUM DISTANCE OF 1'-6" AND A MAXIMUM DISTANCE OF 10'.
- ENSURE THAT THE FACE OF THE PUSHBUTTON IS PARALLEL TO THE CROSSWALK TO BE USED.
- MOUNT THE PUSHBUTTON 42" ABOVE THE CLEAR SPACE. THE MAXIMUM MOUNTING HEIGHT IS 48".
- PROVIDE A MINIMUM DISTANCE OF 10' BETWEEN PEDESTRIAN PUSHBUTTONS. WHERE THERE ARE PHYSICAL CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10' SEPARATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.
- PUSHBUTTONS MAY BE INSTALLED ON A SIGNAL POLE OR PEDESTRIAN PUSHBUTTON POLES. ENSURE THAT POLES WITHIN 10' OF THE FACE OF CURB OR EDGE OF TRAVELED WAY HAVE BREAKAWAY FEATURES.
- INSTALL ACCESSIBLE PEDESTRIAN SIGNALS WHEN RECOMMENDED BY AN ENGINEERING STUDY.
- USE MODULAR OR CAST PEDESTRIAN PUSHBUTTON ASSEMBLIES. DO NOT USE H FRAME PEDESTRIAN PUSHBUTTON ASSEMBLIES. USE THE R10-3e(MUTCD) SIGN ON THE PUSHBUTTON ASSEMBLY.
- CROSSWALK MARKINGS MAY VARY.
- DRAWINGS NOT TO SCALE.



ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

ORIGINAL SIGNED BY: RYAN D. LANCASTER DATE: JUNE 17, 2014

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
CADD FILE NAME: 656-15\_0614.dgn  
DRAWING DATE: MAY, 2014

**IDAHO TRANSPORTATION DEPARTMENT**

BOISE IDAHO

ORIGINAL SIGNED BY: CARL D. MAIN  
DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING  
**PEDESTRIAN PUSHBUTTON PLACEMENT**

**English**  
STANDARD DRAWING NO.  
**656-15**  
SHEET 1 OF 1