

EPC STORMWATER REVIEW COMMENTS
IN ORANGE BOXES WITH BLACK TEXT

UDON SOUTH SITE DEVELOPMENT PLAN 12265 HIGHWAY 94

THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 18,
TOWNSHIP 14 SOUTH, RANGE 64 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF
EL PASO, STATE OF COLORADO, EXCEPT ANY PORTION THEREOF WITHIN THE RIGHT
OF WAY FOR HIGHWAY 94

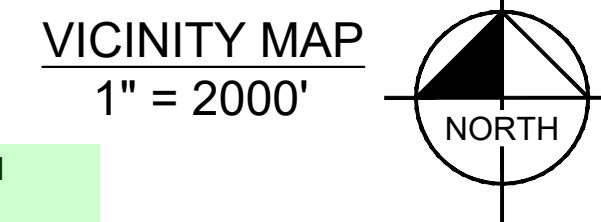
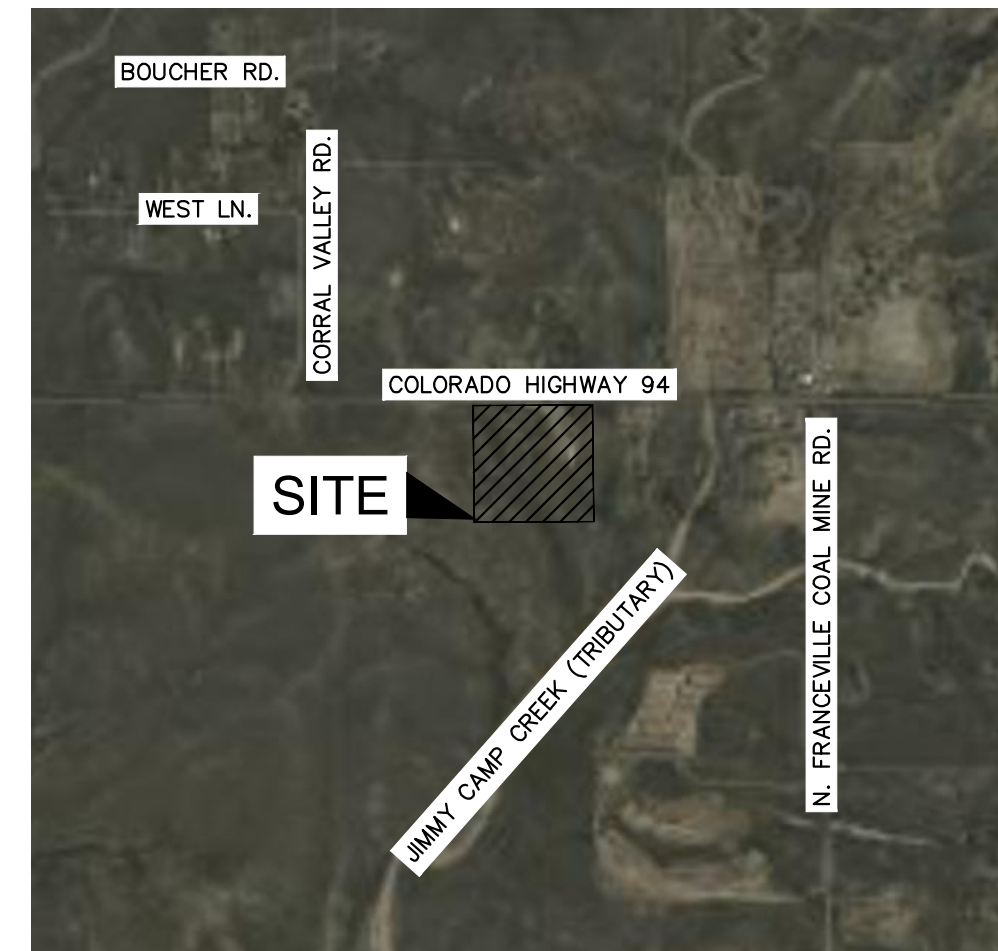
GENERAL NOTES

- THE PARTIES RESPONSIBLE FOR THIS PLAN HAVE FAMILIARIZED THEMSELVES WITH ALL CURRENT ACCESSIBILITY CRITERIA AND SPECIFICATIONS AND THE PROPOSED PLAN REFLECTS ALL SITE ELEMENTS REQUIRED BY THE APPLICABLE ADA DESIGN STANDARDS AND GUIDELINES AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE. APPROVAL OF THIS PLAN BY EL PASO COUNTY DOES NOT ASSURE COMPLIANCE WITH THE ADA OR ANY REGULATIONS OR GUIDELINES ENACTED OR PROMULGATED UNDER OR WITH RESPECT TO SUCH LAWS.
- THE OWNER AGREES ON BEHALF OF HIM/HERSELF AND ANY DEVELOPER OR BUILDER SUCCESSORS AND ASSIGNEES THAT SUBDIVIDER AND/OR SAID SUCCESSORS AND ASSIGNS SHALL BE REQUIRED TO PAY TRAFFIC IMPACT FEES IN ACCORDANCE WITH THE EL PASO COUNTY ROAD IMPACT FEE PROGRAM RESOLUTION (RESOLUTION NO. 19-471), OR ANY AMENDMENTS THERETO, AT OR PRIOR TO THE TIME OF BUILDING PERMIT SUBMITTALS. THE FEE OBLIGATION, IF NOT PAID AT FINAL PLAT RECORDING, SHALL BE DOCUMENTED ON ALL SALES DOCUMENTS AND ON PLAT NOTES TO ENSURE THAT A TITLE SEARCH WOULD FIND THE FEE OBLIGATION BEFORE SALE OF THE PROPERTY.

SITE DATA

ZONING CLASSIFICATION: COMMERCIAL-SERVICE (CS)
CURRENT LAND USE: RESIDENTIAL RURAL / COMMERCIAL
JURISDICTION: EL PASO COUNTY
SITE ADDRESS: 12265 & 12345 HIGHWAY 94
TAX SCHEDULE NO.: 4400000237
BUILDING SETBACKS: 25' FRONT SETBACK
25' REAR SETBACK
25' SIDE SETBACK
MAXIMUM BUILDING HEIGHT: 45 FT
MIN. AREA PER ZONING DISTRICT: 2 ACRES
MIN. LOT SIZE: N/A
MAX LOT COVERAGE: N/A
EXISTING BUILDING AREA: ±9,002 SF

Provide open space, landscaping, and impermeable surface percentage
Provide total gross building square footage



Add applicant/owner phone number and email address for the responsible party

CONTACTS:

OWNER:
UDON HOLDINGS, LLC.
12265 HIGHWAY 94
COLORADO SPRINGS, CO 80929

ENGINEER:
KIMLEY-HORN AND ASSOCIATES, INC.
2 NEVADA NORTH AVE., SUITE 900
COLORADO SPRINGS, CO 80903
TEL: (719) 453-0180
CONTACT: KEVIN KOFFORD, P.E.

PLANNER:
KIMLEY-HORN AND ASSOCIATES, INC.
2 NEVADA NORTH AVE., SUITE 900
COLORADO SPRINGS, CO 80903
TEL: (719) 453-0180
CONTACT: JIM HOUK

SURVEYOR:
CLARK LAND SURVEYING, INC.
177 S. TIFFANY DR. UNIT 1
PUEBLO WEST, CO 81007
TEL: (719) 582-1270
CONTACT: STUART MAPES, JR, P.L.S.

EL PASO COUNTY:
EL PASO COUNTY
DEVELOPMENT SERVICES DEPARTMENT
2880 INTERNATIONAL CIRCLE, SUITE 110
COLORADO SPRINGS, CO 80910
PHONE: (719) 520-3600

LAND AREA

TOTAL PROPERTY AREA: +/- 34.71 ACRES

GEOLOGICAL HAZARDS NOTE:

A "SOIL, GEOLOGY, AND GEOLOGIC HAZARD EVALUATION 12265 HIGHWAY 94 EL PASO COUNTY, COLORADO" WAS PREPARED BY ENTECH, DATED MAY 19, 2022. MAPPING HAS BEEN PERFORMED ON THIS SITE TO IDENTIFY AREAS WHERE VARIOUS GEOLOGIC CONDITIONS EXIST OF WHICH DEVELOPERS SHOULD BE COGNIZANT DURING THE PLANNING, DESIGN, AND CONSTRUCTION STAGES SHOULD NEW CONSTRUCTION BE PROPOSED. THE ENGINEERING GEOLOGIC HAZARDS IDENTIFIED ON THE THIS SITE INCLUDE:

- ARTIFICIAL FILL
- EXPANSIVE SOILS
- POTENTIALLY UNSTABLE SLOPES
- DRAINAGE AREAS/FLOODPLAINS
- POTENTIALLY SEASONAL SHALLOW GROUNDWATER AREA

THE EXISTING GEOLOGIC AND ENGINEERING GEOLOGIC CONDITIONS WILL IMPOSE SOME MINOR CONSTRAINTS ON DEVELOPMENT AND CONSTRUCTION. THESE AREAS WHICH CAN BE SATISFACTORILY MITIGATED THROUGH PROPER ENGINEERING DESIGN AND CONSTRUCTION PRACTICES, OR AVOIDANCE.

Sheet Number	Sheet Title
1	COVER SHEET
2	SITE MAP
3	SITE PLAN
4	GRADING PLAN
5	ADA GRADING PLAN
6	ADA GRADING DETAILS
7	TYPICAL SECTION
8	DRIVEWAY DETAILS
9	POND PLAN
10	POND DETAILS
11	POND DETAILS
12	ROCK CHUTE DETAILS
13	CULVERT PLAN AND PROFILE
14	CULVERT PLAN AND PROFILE
15	CULVERT PLAN AND PROFILE
16	PHOTOMETRIC PLAN
17	PHOTOMETRIC DETAILS
18	LANDSCAPE PLAN
19	SHEET NOTES
20	LANDSCAPE DETAILS

Please remove all the construction related sheets from the site dev plan set and either add to the GEC plan set or a separate CD set.

Remove from site dev plan set

Remove from site dev plan
See Site Dev Plan checklist

LEGAL DESCRIPTION

THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 18, TOWNSHIP 14 SOUTH, RANGE 64 WEST, OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO, EXCEPT ANY PORTION THEREOF WITHIN THE RIGHT OF WAY FOR HIGHWAY 94, AS DESCRIBED IN THAT GENERAL WARRANTY DEED, RECORDED AS RECEPTION NO. 219151478, ON DECEMBER 3, 2019, IN THE OFFICIAL PUBLIC RECORDS, EL PASO COUNTY, COLORADO.

CONTAINING 34.71 +/- ACRES

BENCHMARK:

NO. 6 REBAR WITH 3-1/4" ALUMINUM CAP, STAMPED "PE-LS 9853", 0.72' ABOVE GRADE, AS SHOWN. ELEVATION: 6227.66' (NAVD 88)

BASIS OF BEARINGS:

BEARINGS ARE BASED ON THE SOUTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 18, TOWNSHIP 14 SOUTH, RANGE 64 WEST, OF THE 6TH PRINCIPAL MERIDIAN, EL PASO COUNTY, COLORADO, MONUMENTED AT NORTH 1/16 CENTER CORNER OF SAID SECTION 18, BY A NO. 6 REBAR WITH A 2 INCH ALUMINUM CAP, STAMPED "PLS 18465", FLUSH WITH GRADE, AND AT THE NORTHWEST 1/16 CORNER OF SAID SECTION 18, BY A NO. 6 REBAR WITH A 3-1/4 INCH ALUMINUM CAP, STAMPED "PE-LS 9853", 0.72 FEET ABOVE GRADE, AS SHOWN HEREON, AND MEASURED TO BEAR S89°48'31"W A DISTANCE OF 1246.37 FEET.

SOIL TYPE:

± 100% OF THE SOIL ON SITE IS CLASSIFIED WITH THE USCS AS HYDROLOGIC SOIL GROUP D.

FEMA CLASSIFICATION:

THE PROPOSED PROJECT SITE IS LOCATED IN ZONE X AN AREA OF MINIMAL FLOOD HAZARD. FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP, MAP NUMBERS 08041C0780C EFFECTIVE DATE DECEMBER 7, 2018.

DESIGN ENGINEERS STATEMENT:

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

KEVIN R. KOFFORD P.E.
COLORADO REGISTERED PROFESSIONAL ENGINEER NO. 57234

DATE

OWNER/DEVELOPERS STATEMENT:

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

BEN WILBOR
UDON HOLDINGS, LLC
5755 MARK DABLING BLVD. STE. 245
COLORADO SPRINGS, CO 80919

DATE

EL PASO COUNTY:

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

JOSHUA PALMER, P.E.
COUNTY ENGINEER / ECM ADMINISTRATOR

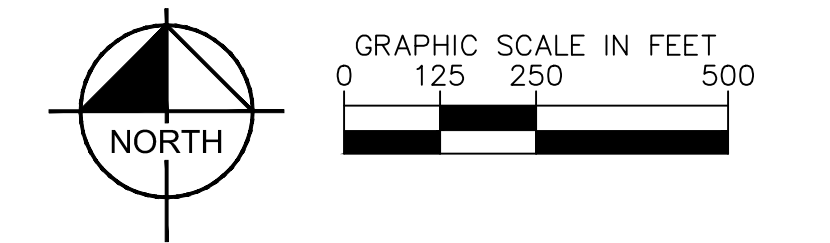
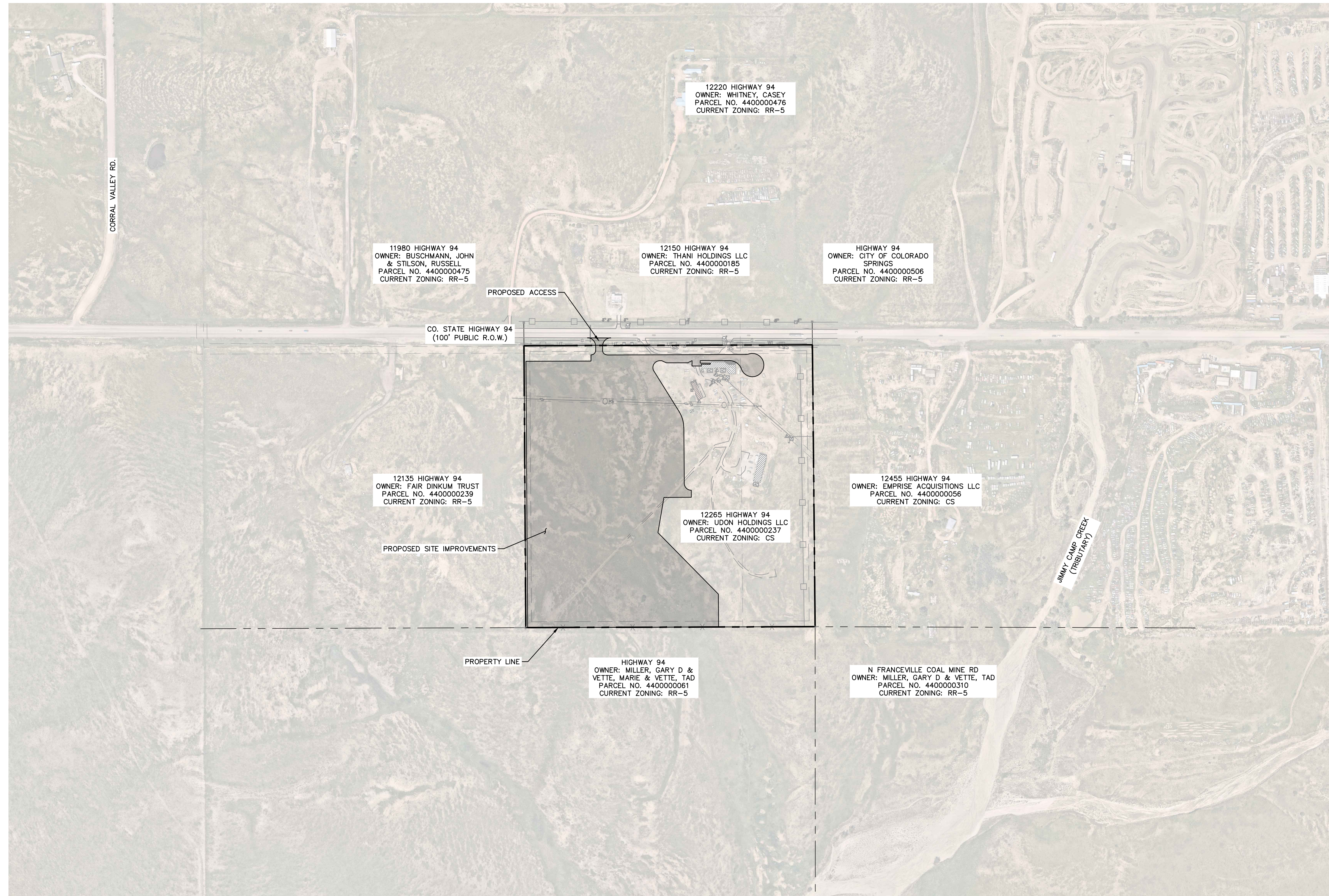
DATE

COVER SHEET

SHEET 1 OF 20



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2 NORTH NEVADA AVENUE, SUITE 900
COLORADO SPRINGS, COLORADO 80903 (719) 453-0180



11980 HIGHWAY 94
OWNER: BUSCHMANN, JOHN & STILSON, RUSSELL
PARCEL NO. 440000475
CURRENT ZONING: RR-5

12220 HIGHWAY 94
OWNER: WHITNEY, CASEY
PARCEL NO. 440000476
CURRENT ZONING: RR-5

12150 HIGHWAY 94
OWNER: THANI HOLDINGS LLC
PARCEL NO. 440000185
CURRENT ZONING: RR-5

HIGHWAY 94
OWNER: CITY OF COLORADO SPRINGS
PARCEL NO. 440000506
CURRENT ZONING: RR-5

12135 HIGHWAY 94
OWNER: FAIR DINKUM TRUST
PARCEL NO. 440000239
CURRENT ZONING: RR-5

12265 HIGHWAY 94
OWNER: UDON HOLDINGS LLC
PARCEL NO. 440000237
CURRENT ZONING: CS

12455 HIGHWAY 94
OWNER: EMPIRE ACQUISITIONS LLC
PARCEL NO. 440000056
CURRENT ZONING: CS

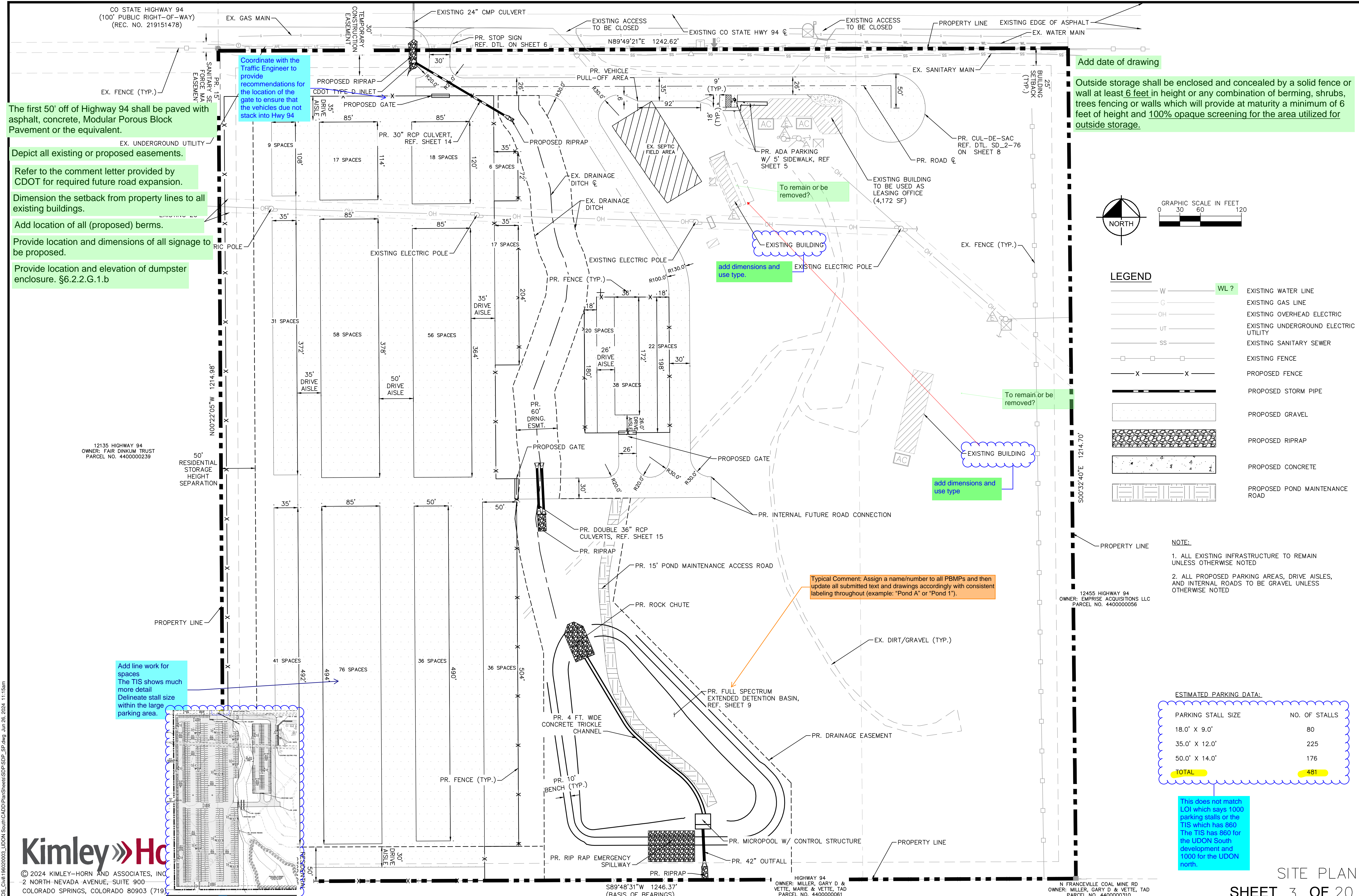
HIGHWAY 94
OWNER: MILLER, GARY D & VETTE, MARIE & VETTE, TAD
PARCEL NO. 440000081
CURRENT ZONING: RR-5

N FRANCEVILLE COAL MINE RD
OWNER: MILLER, GARY D & VETTE, TAD
PARCEL NO. 440000310
CURRENT ZONING: RR-5

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The first 50' off of Highway 94 shall be paved with asphalt, concrete, Modular Porous Block Pavement or the equivalent.

Depict all existing or proposed easements.

Refer to the comment letter provided by CDOT for required future road expansion.

Dimension the setback from property lines to all existing buildings.

Add location of all (proposed) berms.

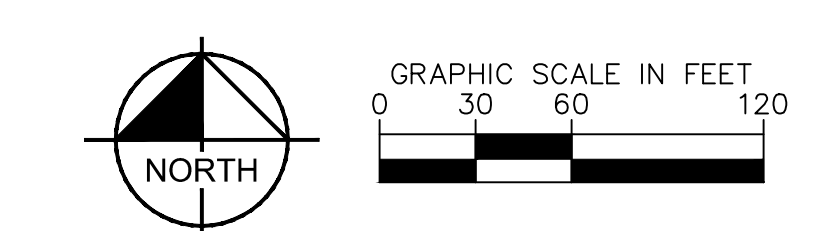
Provide location and dimensions of all signage to be proposed.

Provide location and elevation of dumpster enclosure. §6.2.2.G.1.b

Coordinate with the Traffic Engineer to provide recommendations for the location of the gate to ensure that the vehicles do not stack into Hwy 94

Add date of drawing

Outside storage shall be enclosed and concealed by a solid fence or wall at least 6 feet in height or any combination of berming, shrubs, trees fencing or walls which will provide at maturity a minimum of 6 feet of height and 100% opaque screening for the area utilized for outside storage.



LEGEND

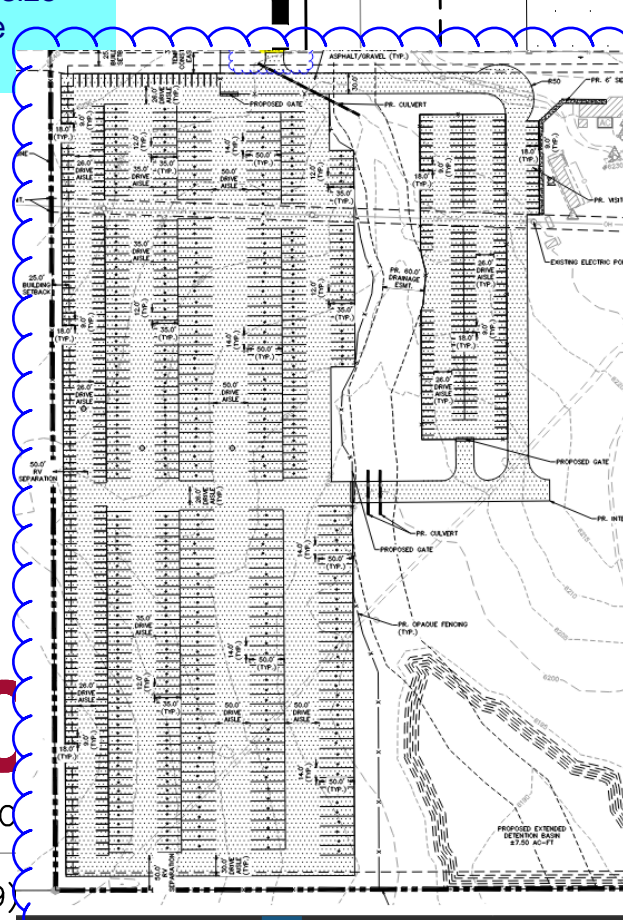
— W —	WL ?	EXISTING WATER LINE
— G —		EXISTING GAS LINE
— OH —		EXISTING OVERHEAD ELECTRIC
— UT —		EXISTING UNDERGROUND ELECTRIC UTILITY
— SS —		EXISTING SANITARY SEWER
— [Symbol] —		EXISTING FENCE
— X — X —		PROPOSED FENCE
— [Symbol] —		PROPOSED STORM PIPE
[Symbol]		PROPOSED GRAVEL
[Symbol]		PROPOSED RIPRAP
[Symbol]		PROPOSED CONCRETE
[Symbol]		PROPOSED POND MAINTENANCE ROAD

NOTE:

- ALL EXISTING INFRASTRUCTURE TO REMAIN UNLESS OTHERWISE NOTED
- ALL PROPOSED PARKING AREAS, DRIVE AISLES, AND INTERNAL ROADS TO BE GRAVEL UNLESS OTHERWISE NOTED

Typical Comment: Assign a name/number to all PBMPs and then update all submitted text and drawings accordingly with consistent labeling throughout (example: "Pond A" or "Pond 1").

Add line work for spaces
The TIS shows much more detail
Delineate stall size within the large parking area.

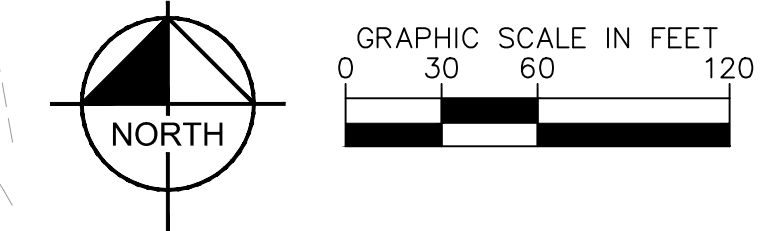
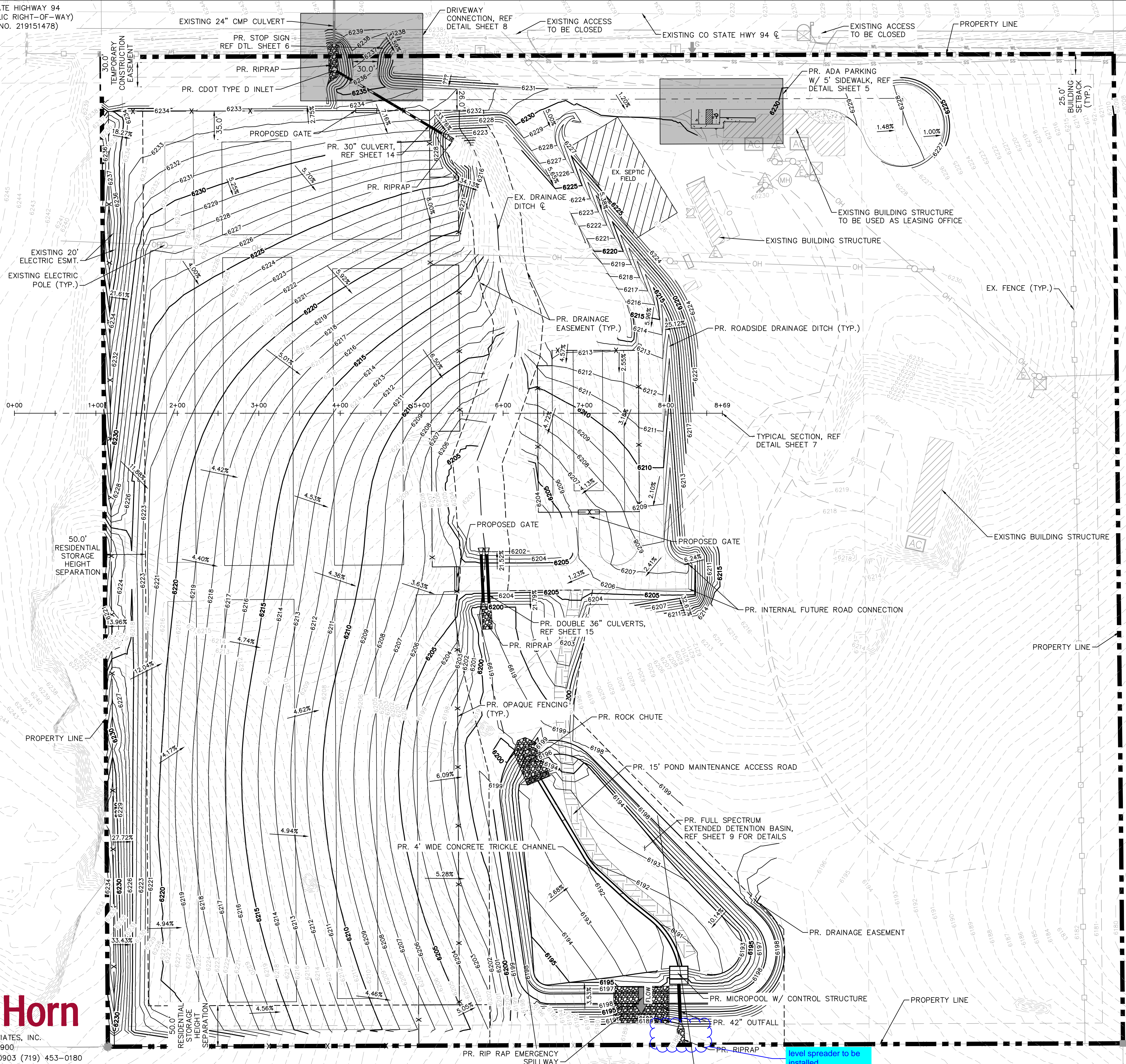


ESTIMATED PARKING DATA:

PARKING STALL SIZE	NO. OF STALLS
18.0' X 9.0'	80
35.0' X 12.0'	225
50.0' X 14.0'	176
TOTAL	481

This does not match LOI which says 1000 parking stalls or the TIS which has 860. The TIS has 860 for the UDON South development and 1000 for the UDON north.

CO STATE HIGHWAY 94
(100' PUBLIC RIGHT-OF-WAY)
(REC. NO. 219151478)



LEGEND

- W — EXISTING WATER LINE
- G — EXISTING GAS LINE
- OH — EXISTING OVERHEAD ELECTRIC
- UT — EXISTING UNDERGROUND ELECTRIC UTILITY
- SS — EXISTING SANITARY SEWER
- [Symbol] — EXISTING FENCE
- X — X — PROPOSED FENCE
- [Symbol] — PROPOSED STORM PIPE
- [Symbol] PROPOSED GRAVEL
- [Symbol] PROPOSED RIPRAP
- [Symbol] PROPOSED CONCRETE
- [Symbol] PROPOSED POND MAINTENANCE ROAD
- XXXX — EXISTING MAJOR CONTOUR
- XXXX — EXISTING MINOR CONTOUR
- XXXX — PROPOSED MAJOR CONTOUR
- XXXX — PROPOSED MINOR CONTOUR
- FFE FINISH FLOOR ELEVATION
- EXP EXPOSURE
- FG FINISHED GRADE
- ME MATCH EXISTING
- SW SIDEWALK
- TOP TOP OF POND
- BOP BOTTOM OF POND

CUT/FILL ORIGINAL:
 FILL ±35828
 CUT ±32976
 NET ±2852 (FILL)

*NET FILL REFLECTS A FILL FACTOR OF 1.2

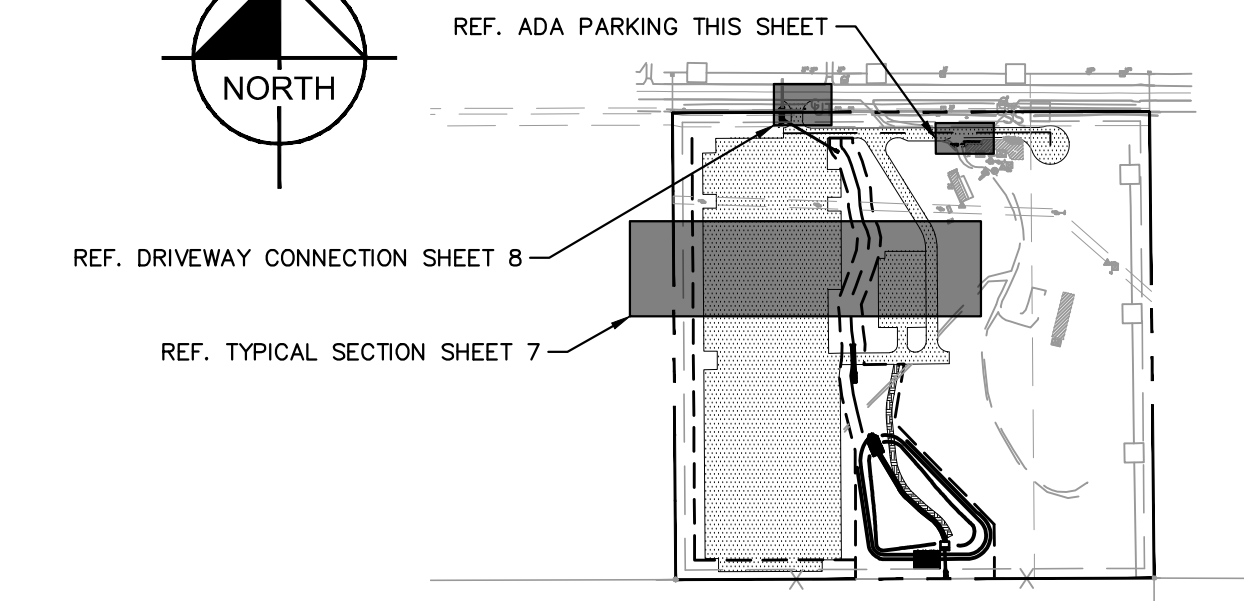
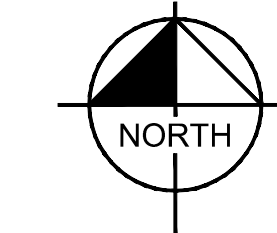


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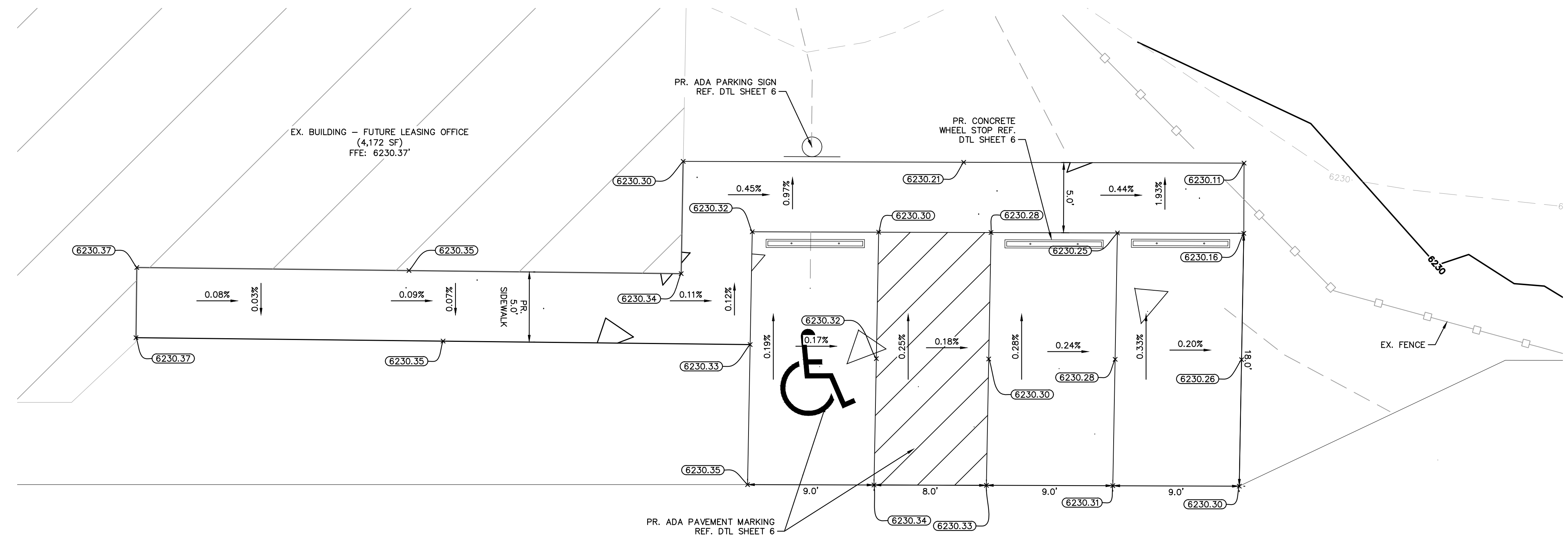
GRADING PLAN
 SHEET 4 OF 20

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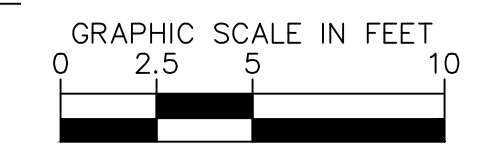
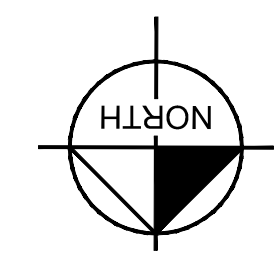
level spreader to be installed



KEY MAP



ADA PARKING GRADING INSET



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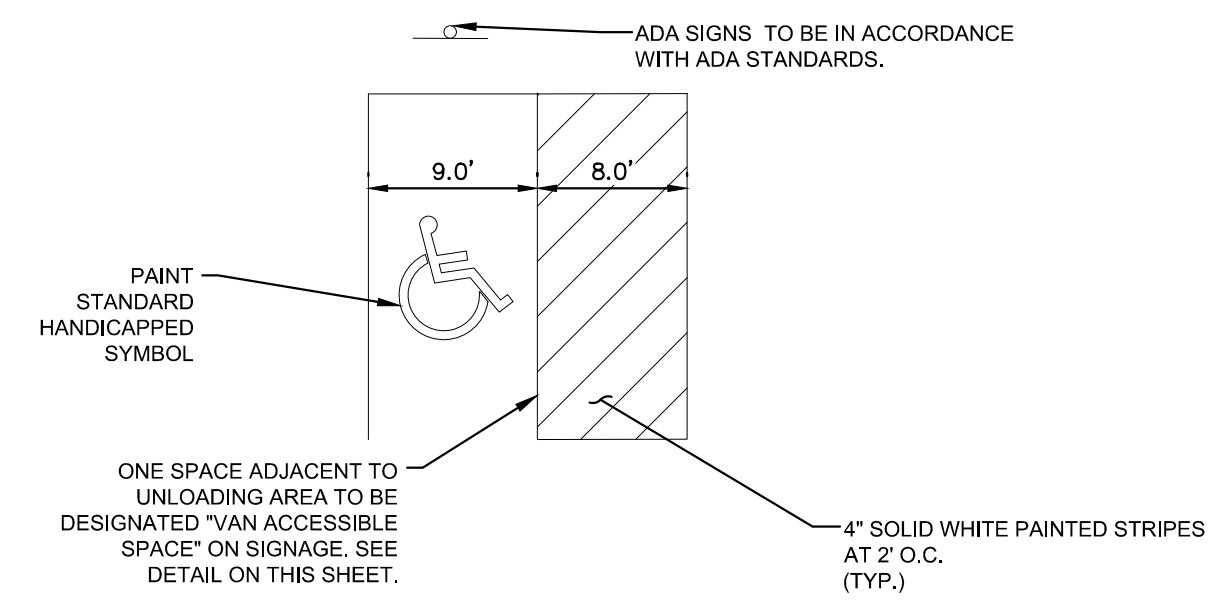
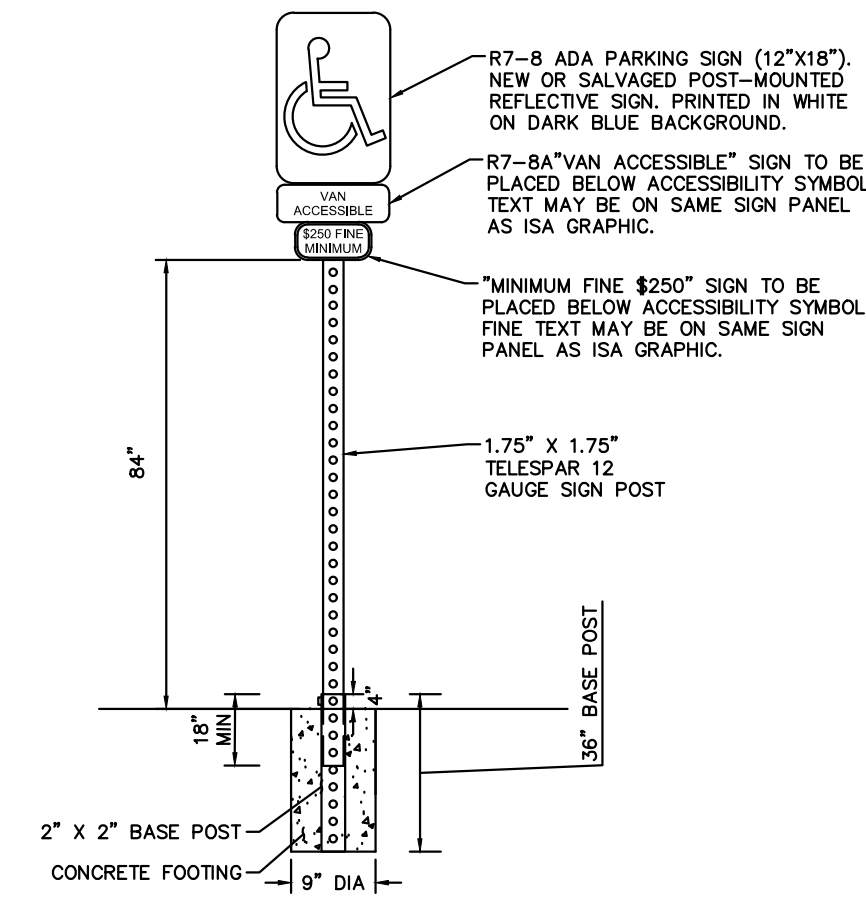
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30"x30"
MINIMUM SIZE

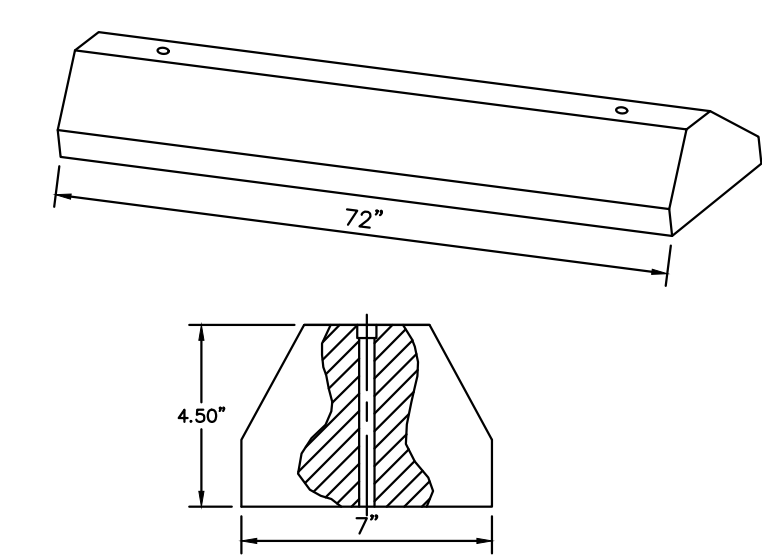
BACKGROUND
4090 (3M-WHITE DIAMOND GRADE) OR EQUIVALENT
FOREGROUND
1172 C (3M-RED EC FILM) OR EQUIVALENT

MUTCD R1-1 STOP SIGN DETAIL
NOT TO SCALE

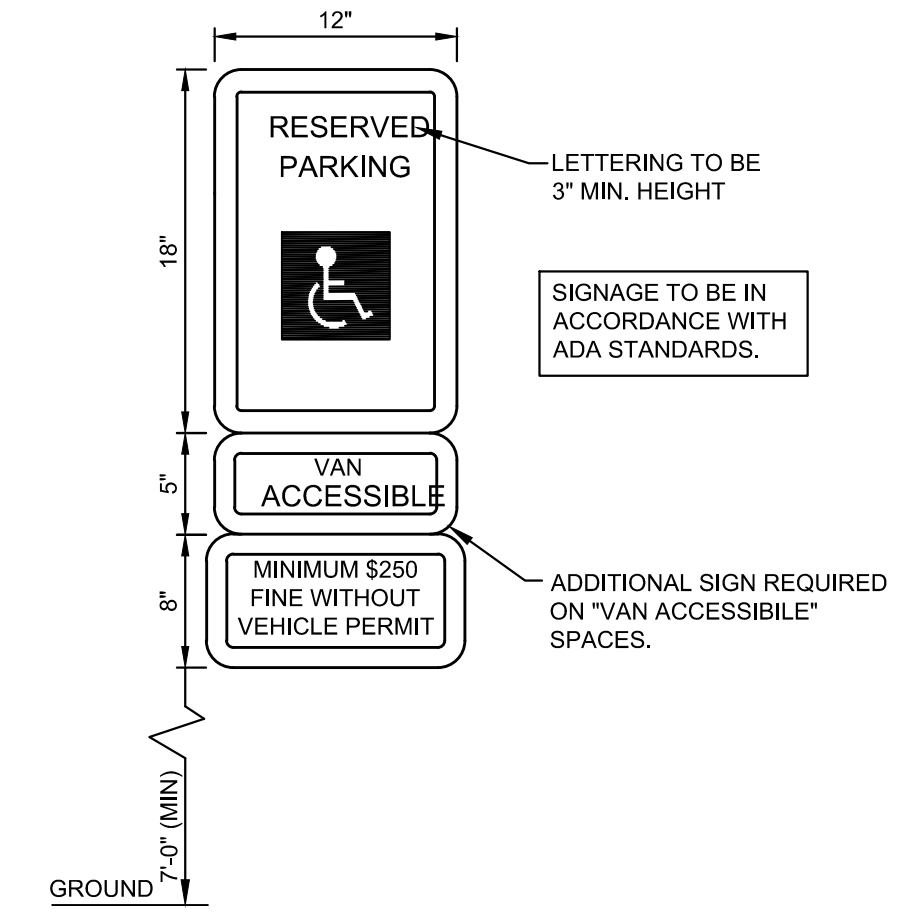


NOTES:
1. DIMENSIONS MAY VARY REFER TO SITE GEOMETRICS PLAN.
2. SIGNAGE AND MARKINGS TO BE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

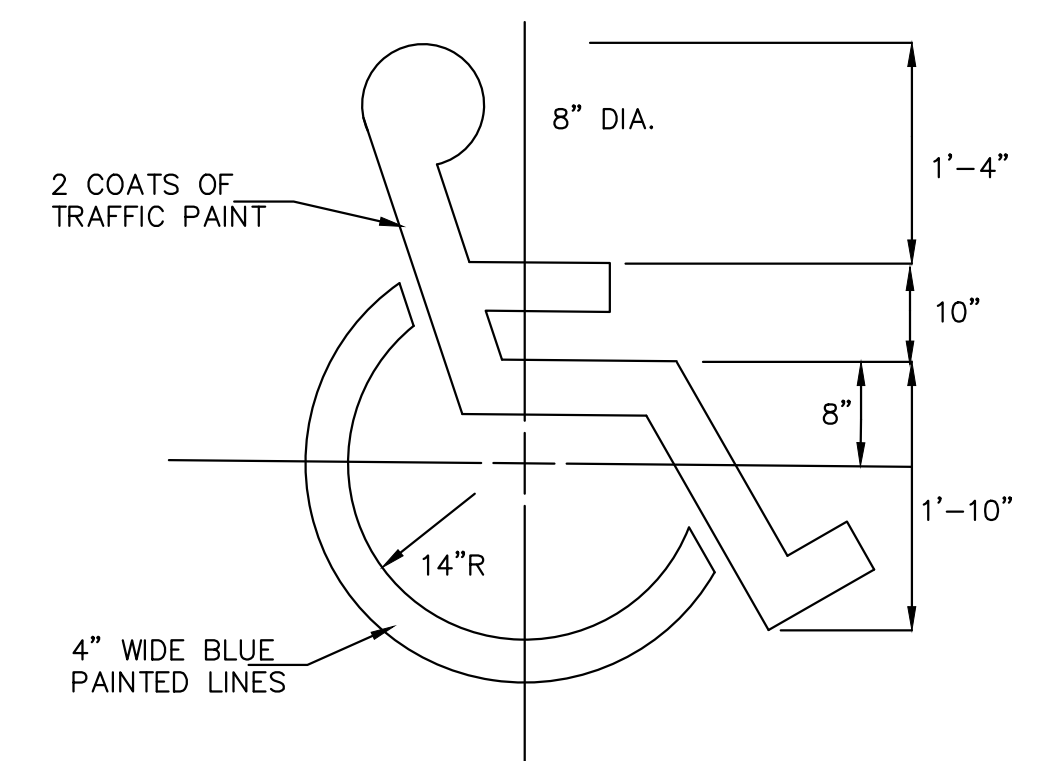
VAN ACCESSIBLE PARKING DETAIL
NOT TO SCALE



WHEEL STOP DETAIL
NOT TO SCALE



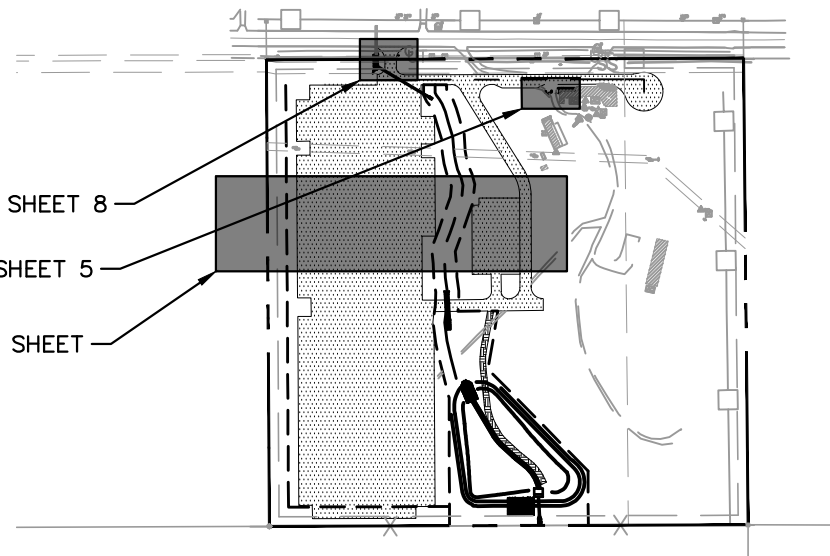
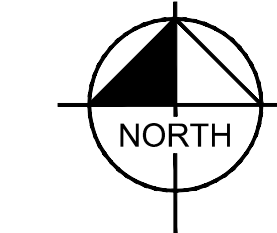
ADA SIGNAGE DETAIL
NOT TO SCALE



NOTE:
1. ALL TRAFFIC MARKINGS TO BE LATEX AS PER DIMENSIONS SHOWN.

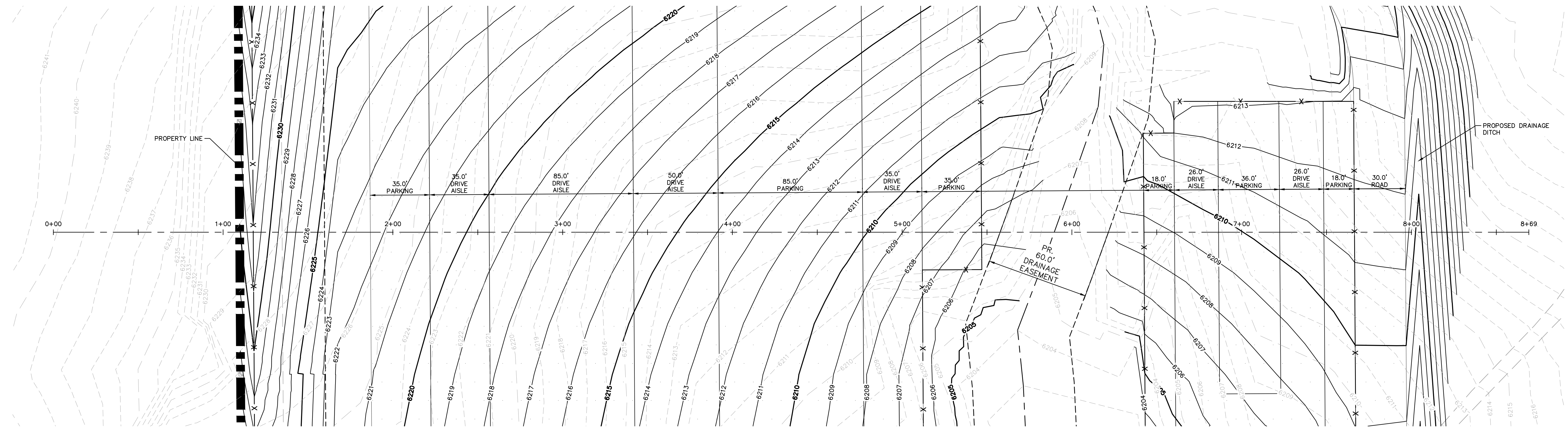
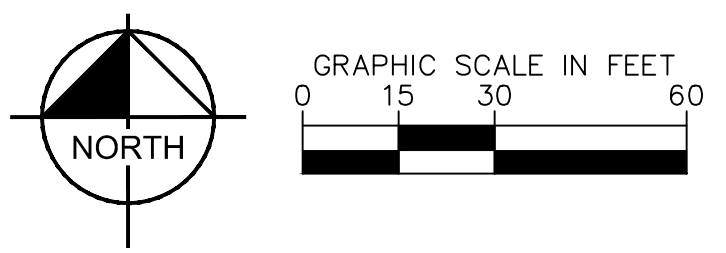
HANDICAP SYMBOL
NOT TO SCALE

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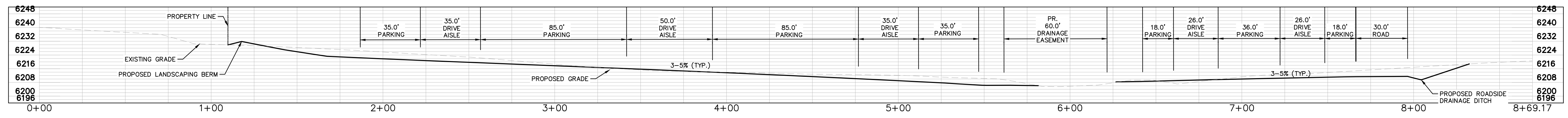


REF. DRIVEWAY CONNECTION SHEET 8
REF. ADA PARKING SHEET 5
REF. TYPICAL SECTION THIS SHEET

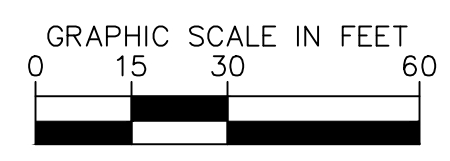
KEY MAP



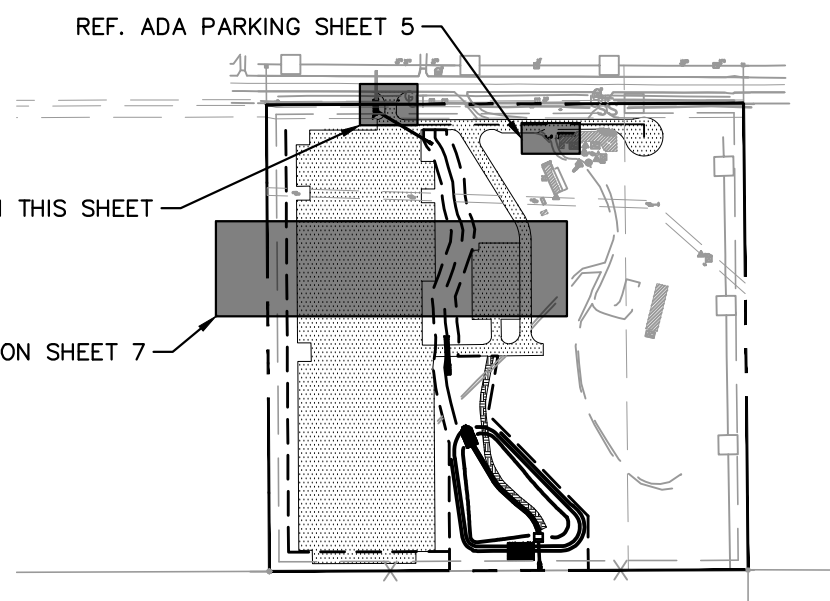
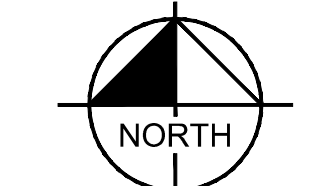
TYPICAL SECTION - PLAN



TYPICAL SECTION - PROFILE

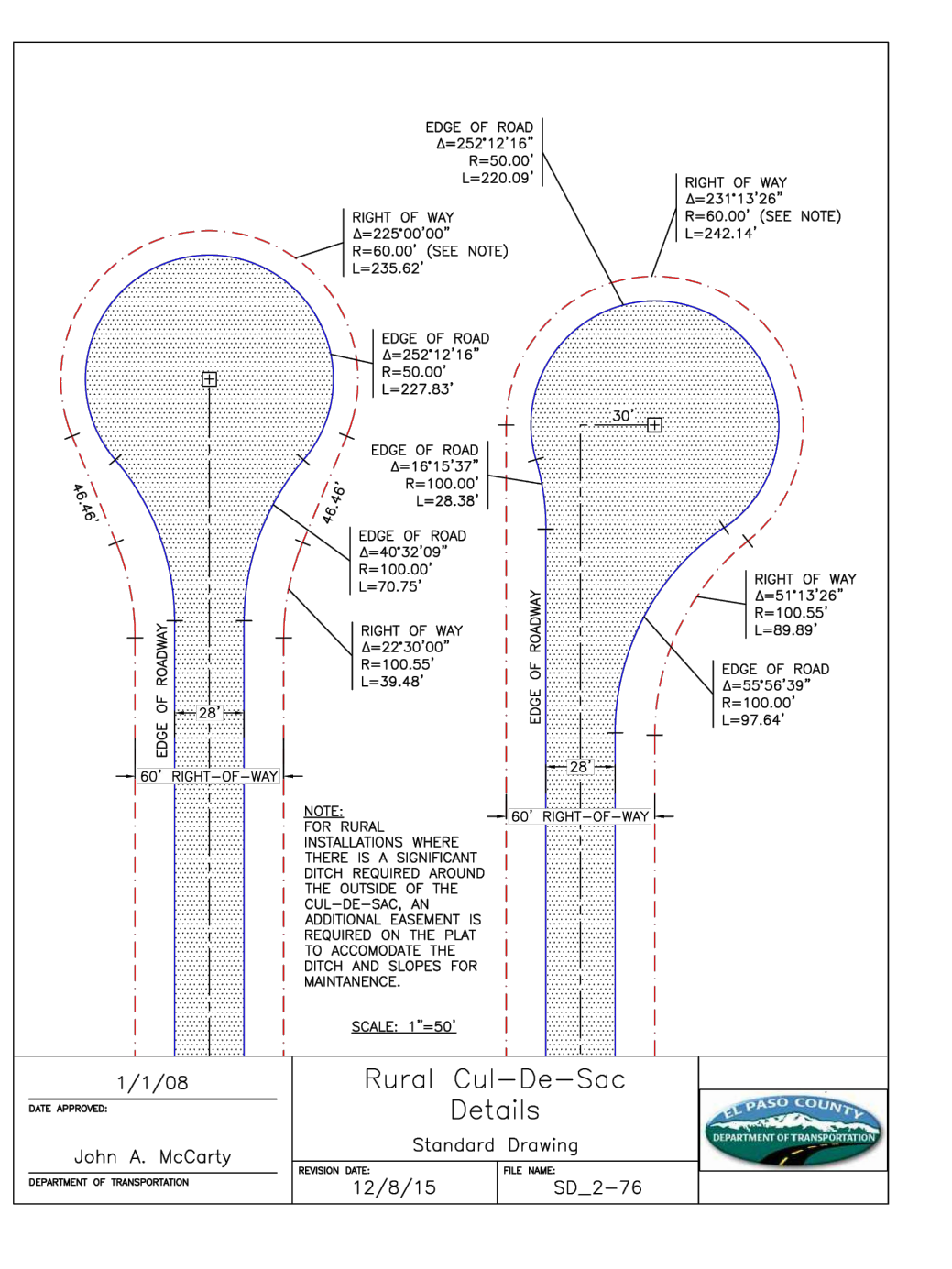
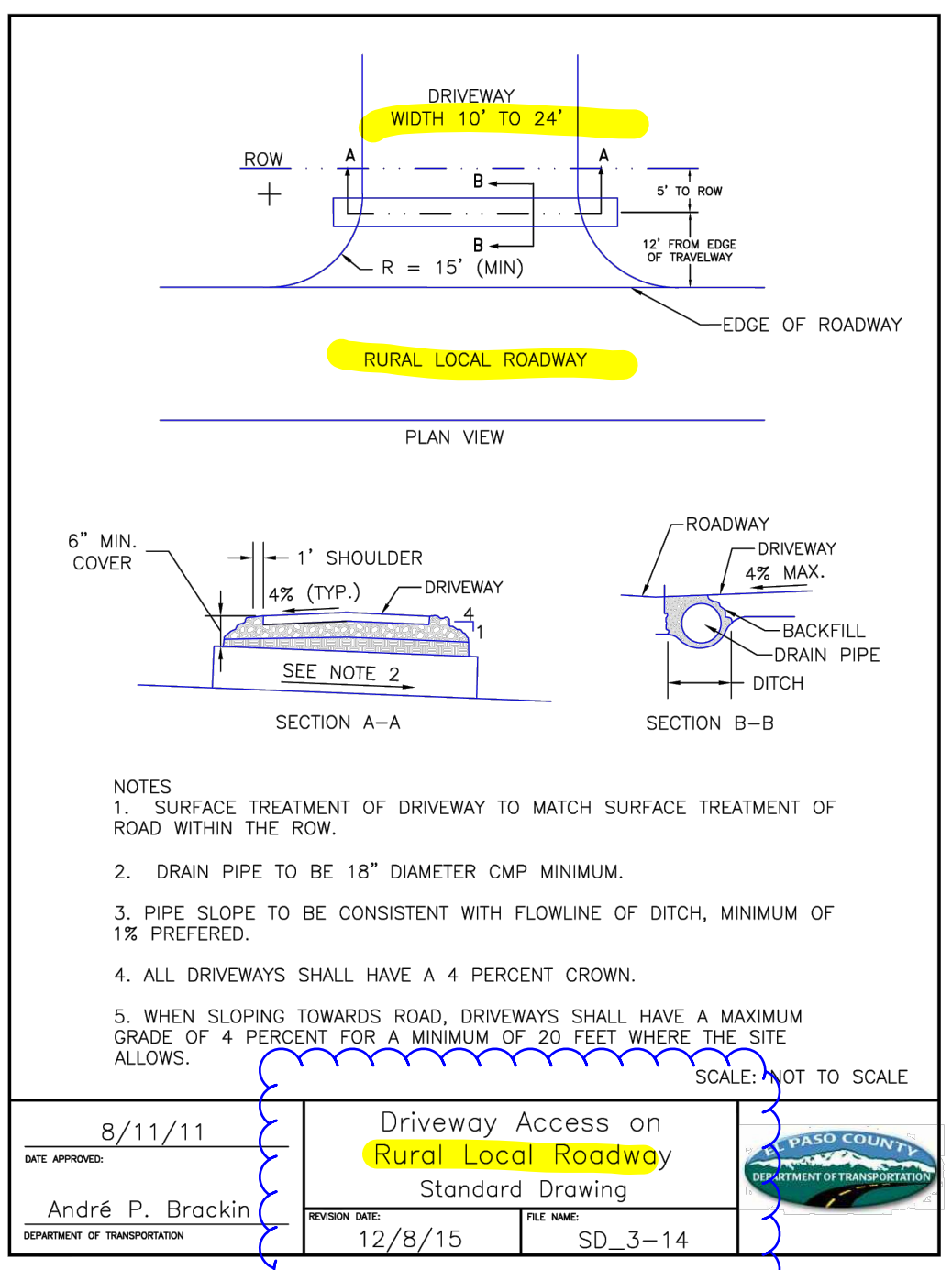


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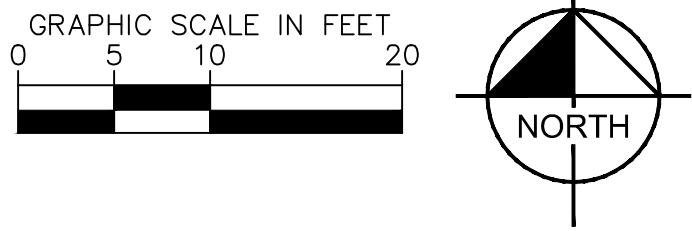
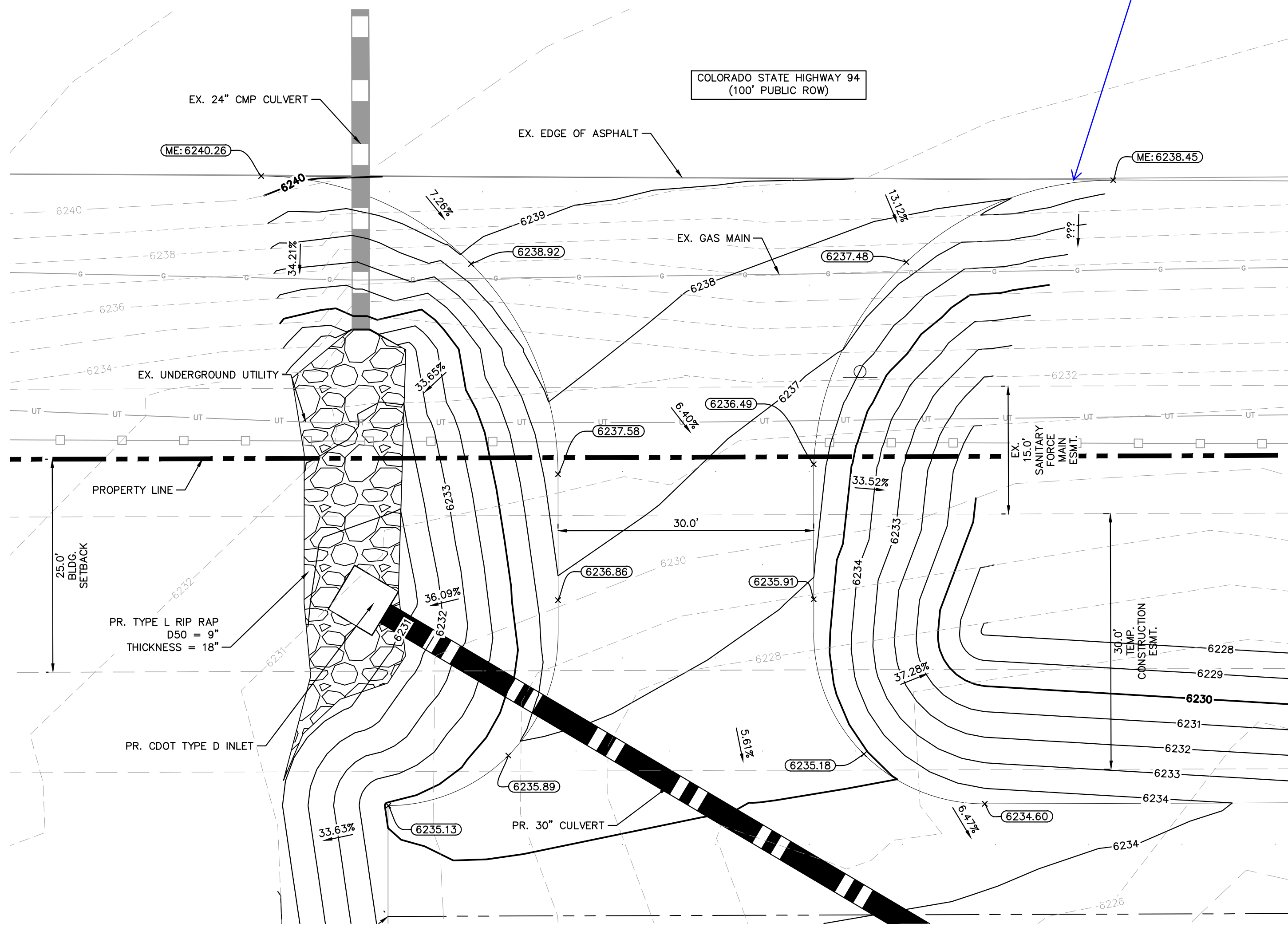


KEY MAP

Coordinate with the Traffic Engineer so that recommendations can be provided for the turn radius of the Driveway for the proposed RV design vehicles. Auto turn exhibits should be provided.



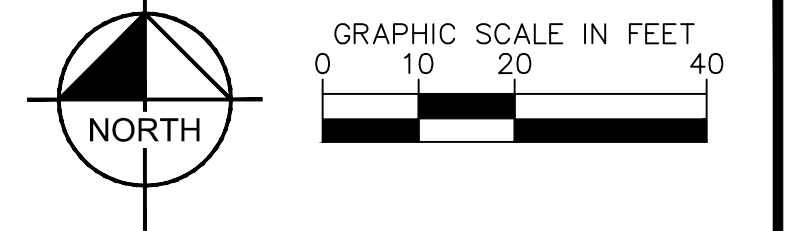
Provide CDOT standard for access. This would be for a residential driveway to a local not a commercial access to an arterial/highway.



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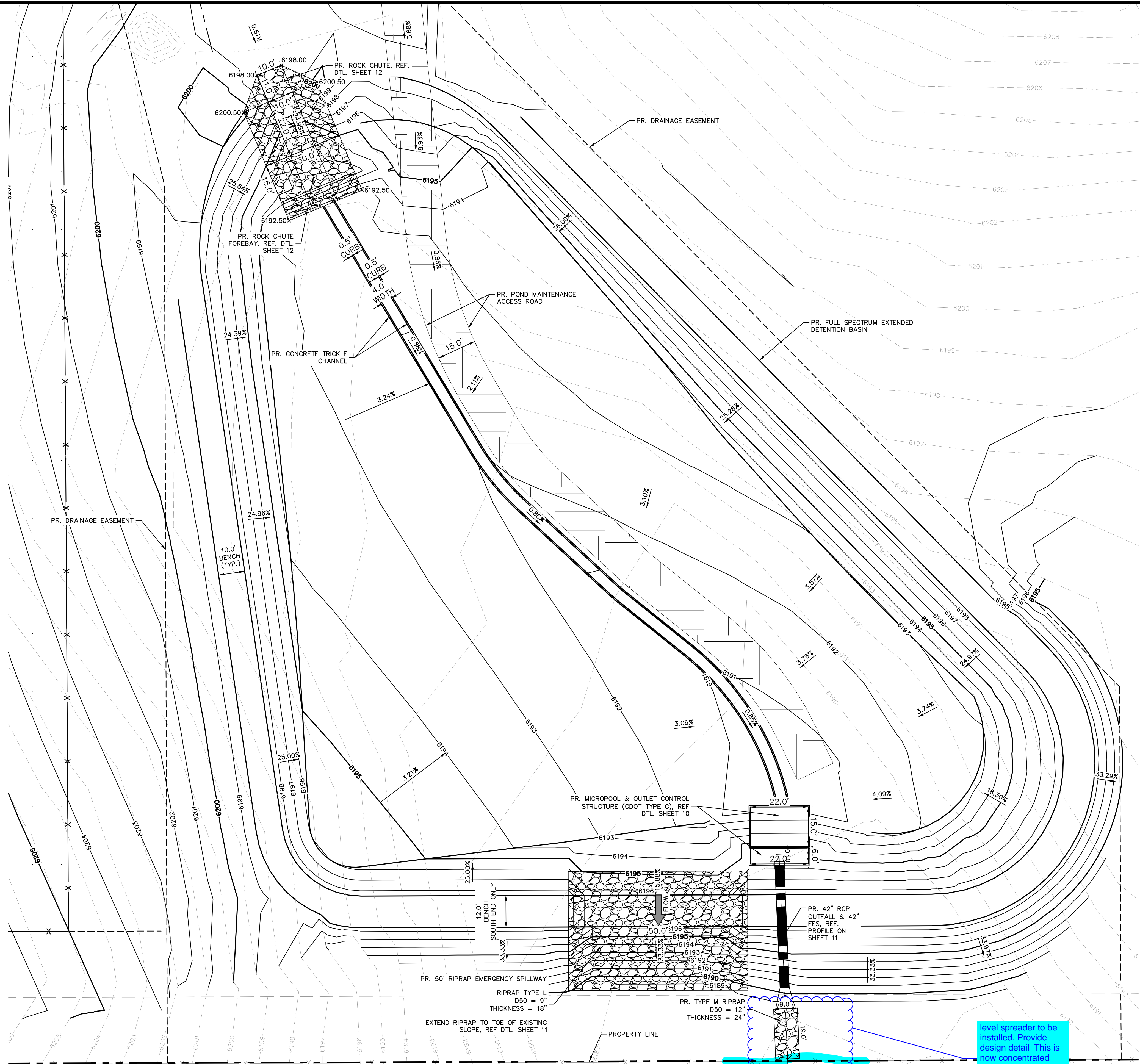
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2 NORTH NEVADA AVENUE, SUITE 900
COLORADO SPRINGS, COLORADO 80903 (719) 453-0180



LEGEND

— W —	EXISTING WATER LINE
— G —	EXISTING GAS LINE
— OH —	EXISTING OVERHEAD ELECTRIC
— UT —	EXISTING UNDERGROUND ELECTRIC UTILITY
— SS —	EXISTING SANITARY SEWER
— X — X —	EXISTING FENCE
— X — X —	PROPOSED FENCE
— — — — —	PROPOSED STORM PIPE
[Pattern]	PROPOSED GRAVEL
[Pattern]	PROPOSED RIPRAP
[Pattern]	PROPOSED CONCRETE
[Pattern]	PROPOSED POND MAINTENANCE ROAD

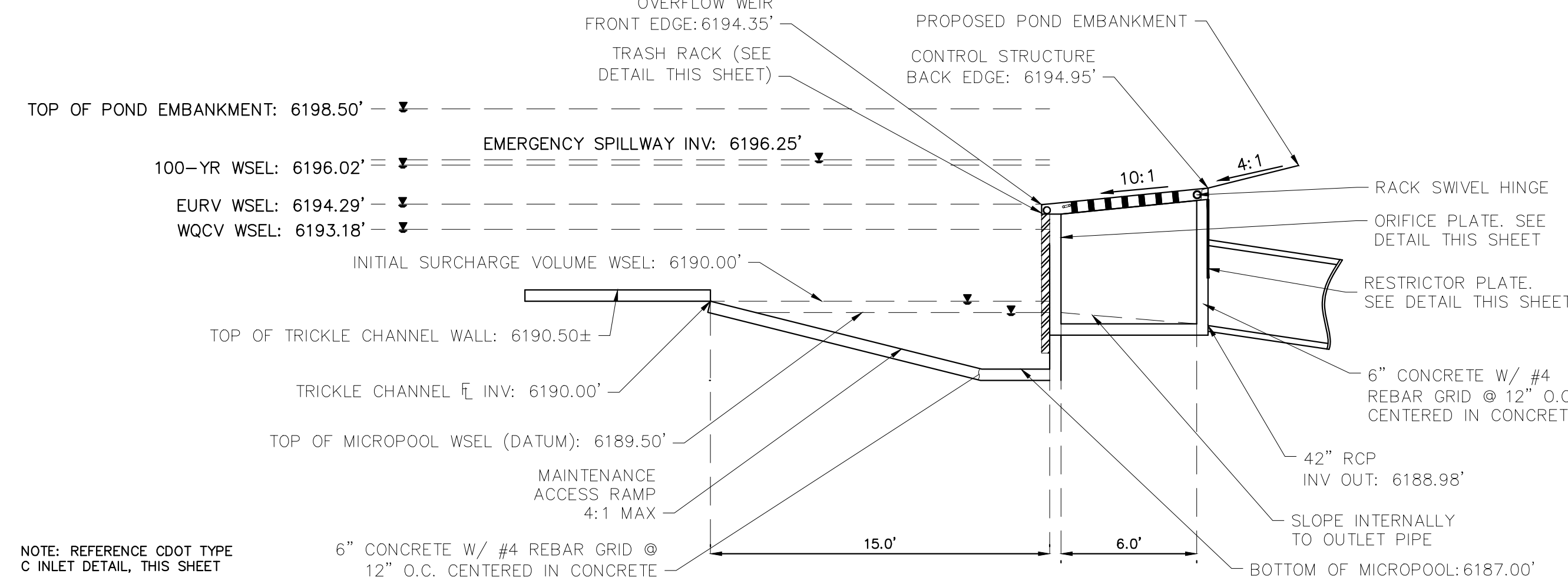
Since this pond isn't deeper than 10ft and doesn't meet other jurisdictional dam minimum criteria, submit Proof of Submittal for a State Non-Jurisdictional Water Impoundment Structure Notification.



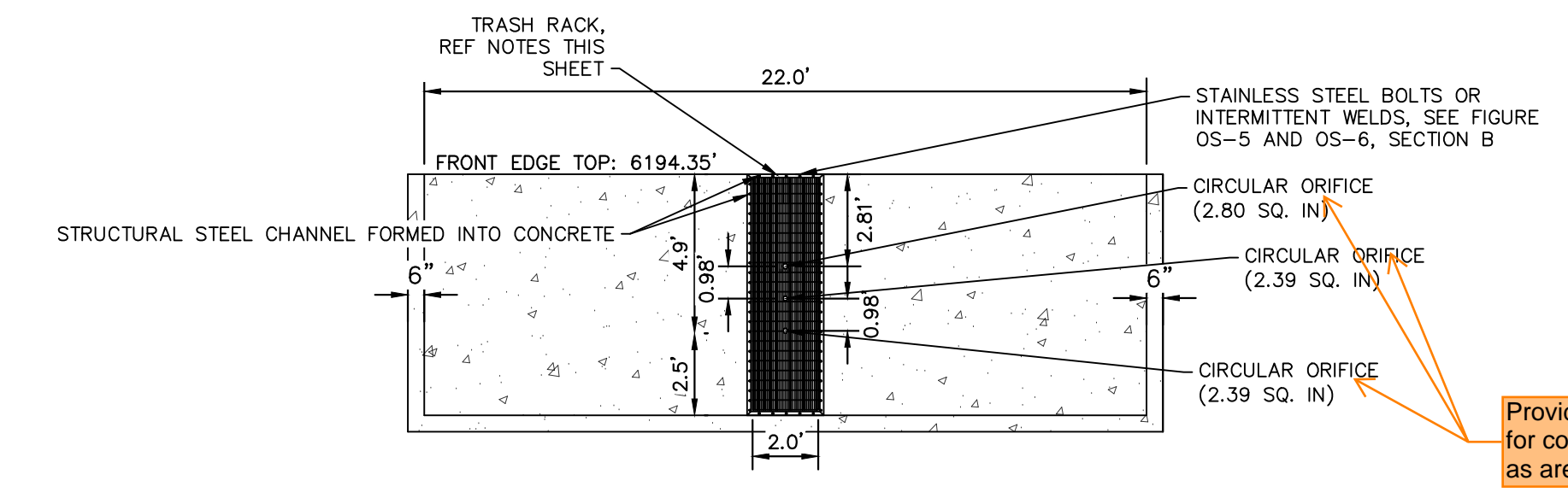
level spreader to be installed. Provide design detail. This is now concentrated flow and point discharge. Update FDR

Typical Comment: Assign a name/number to all PBMPs and then update all submitted text and drawings accordingly with consistent labeling throughout (example: "Pond A" or "Pond 1").

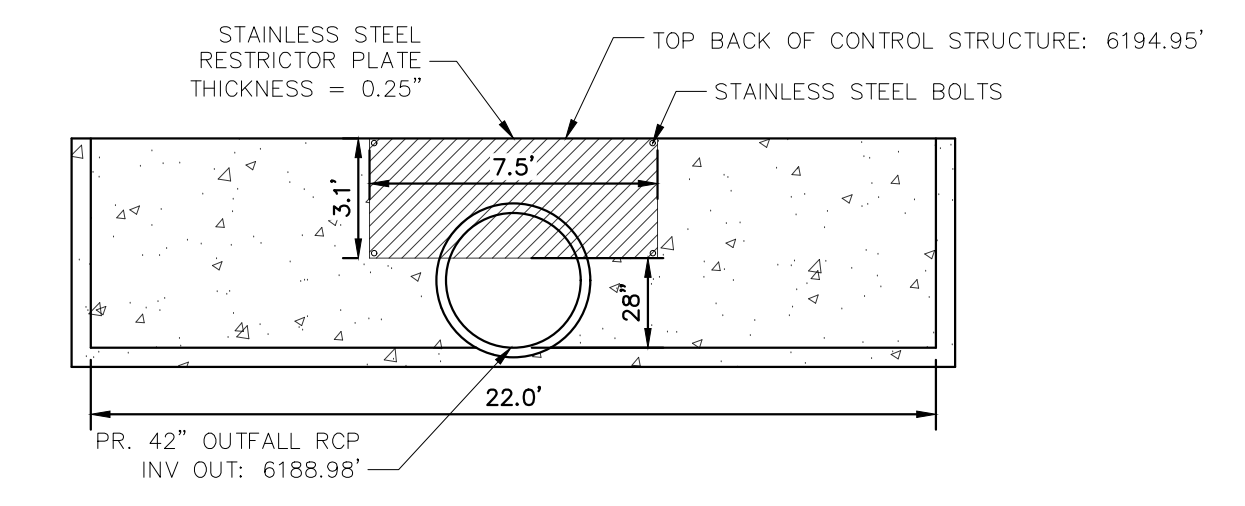
K:\CCS_Civil\19822003_UDON South\CADD\PlanSheets\SDP_POND.dwg Jun 26, 2024 11:16am



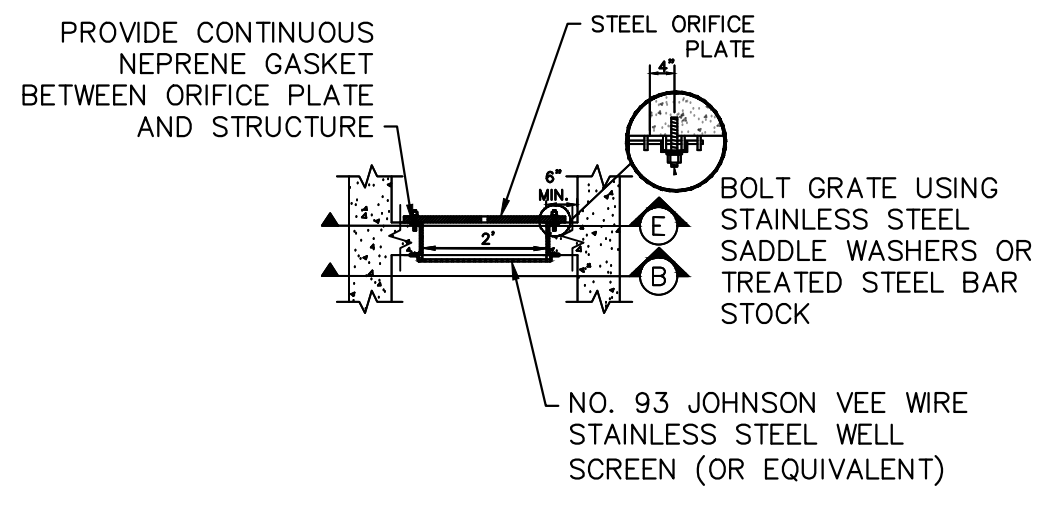
OUTLET STRUCTURE DETAIL
1" = 5'



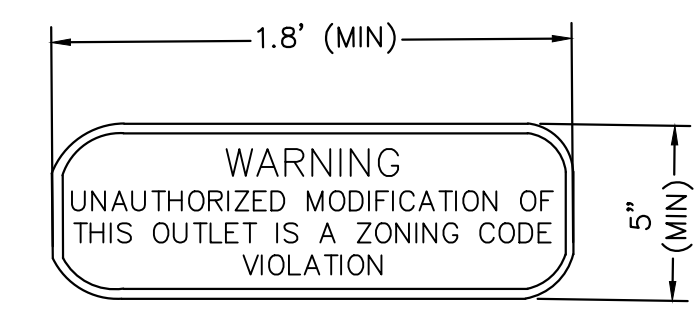
ORIFICE PLATE AND TRASH RACK DETAIL
1" = 5'



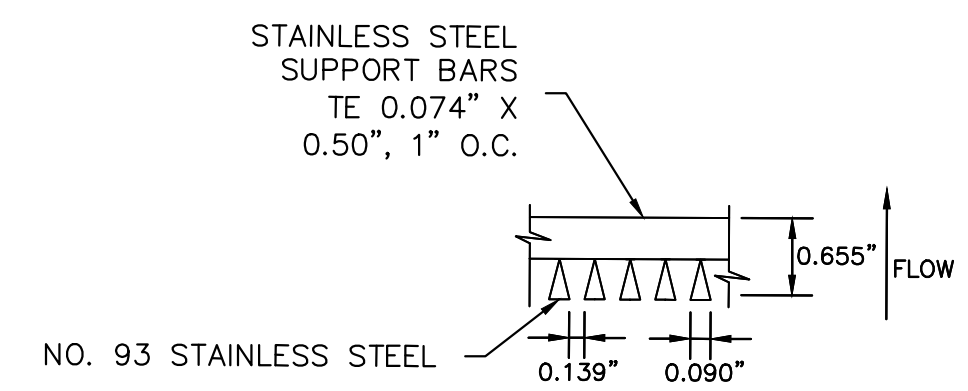
100-YEAR FLOW RESTRICTOR PLATE
1" = 5'



SECTION A
N.T.S.



OUTLET SIGNAGE
N.T.S.



SECTION B
N.T.S.

ORIFICE PLATE NOTES

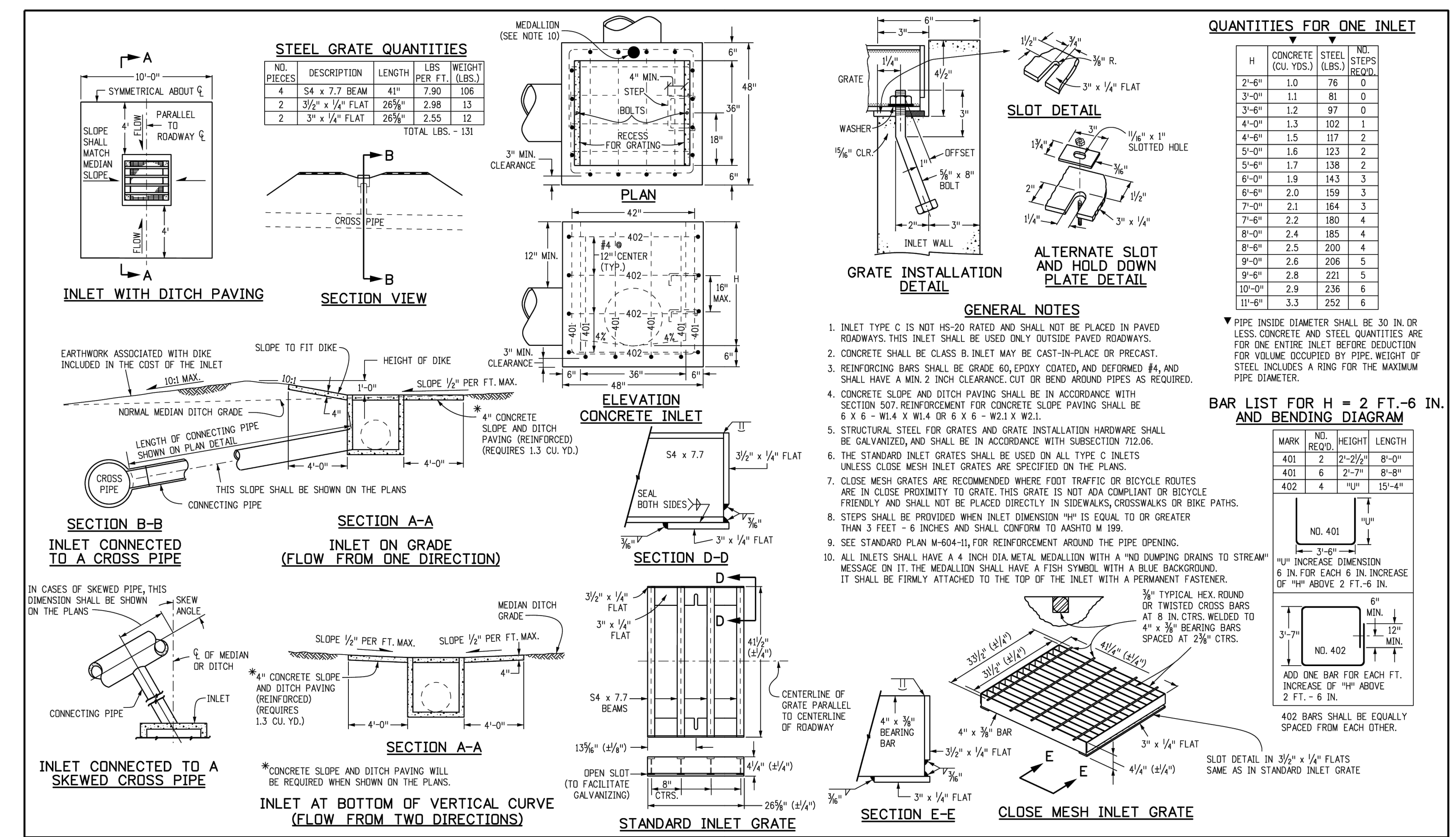
1. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE.
2. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER. WITH A PLATE THICKNESS OF 0.25".

EURV AND WQCV TRASH RACKS

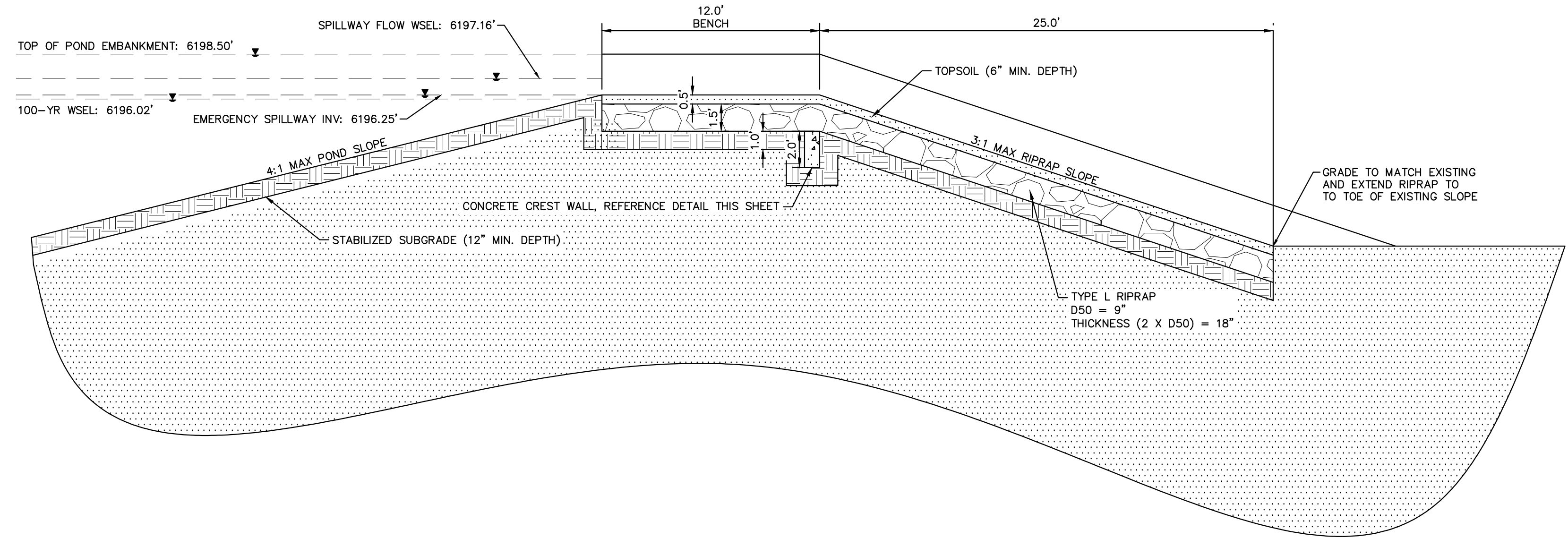
1. WELL-SCREEN TRASH RACKS SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
2. BAR GATE TRASH RACKS SHALL BE ALUMINUM AND SHALL BE BOLTED USING STAINLESS STEEL HARDWARE.
3. TRASH RACK OPEN AREAS ARE FOR SPECIFIED TRASH RACK MATERIALS. TOTAL TRASH RACK SIZE MAY NEED TO BE ADJUSTED FOR MATERIALS HAVING DIFFERENT OPEN AREA/GROSS AREA RATIO (R VALUE).
4. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

OVERFLOW SAFETY GRATES

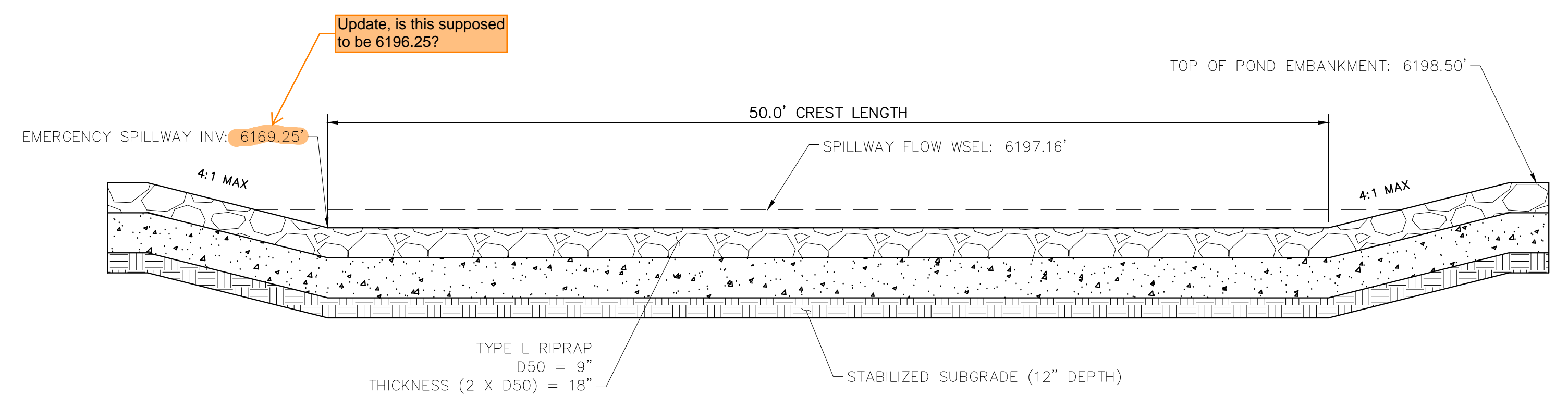
1. ALL SAFETY GRATES SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS.
2. SAFETY GRATES SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL GRATES SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
3. SAFETY GRATES SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.
4. STRUCTURAL DESIGN OF SAFETY GRATES SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.



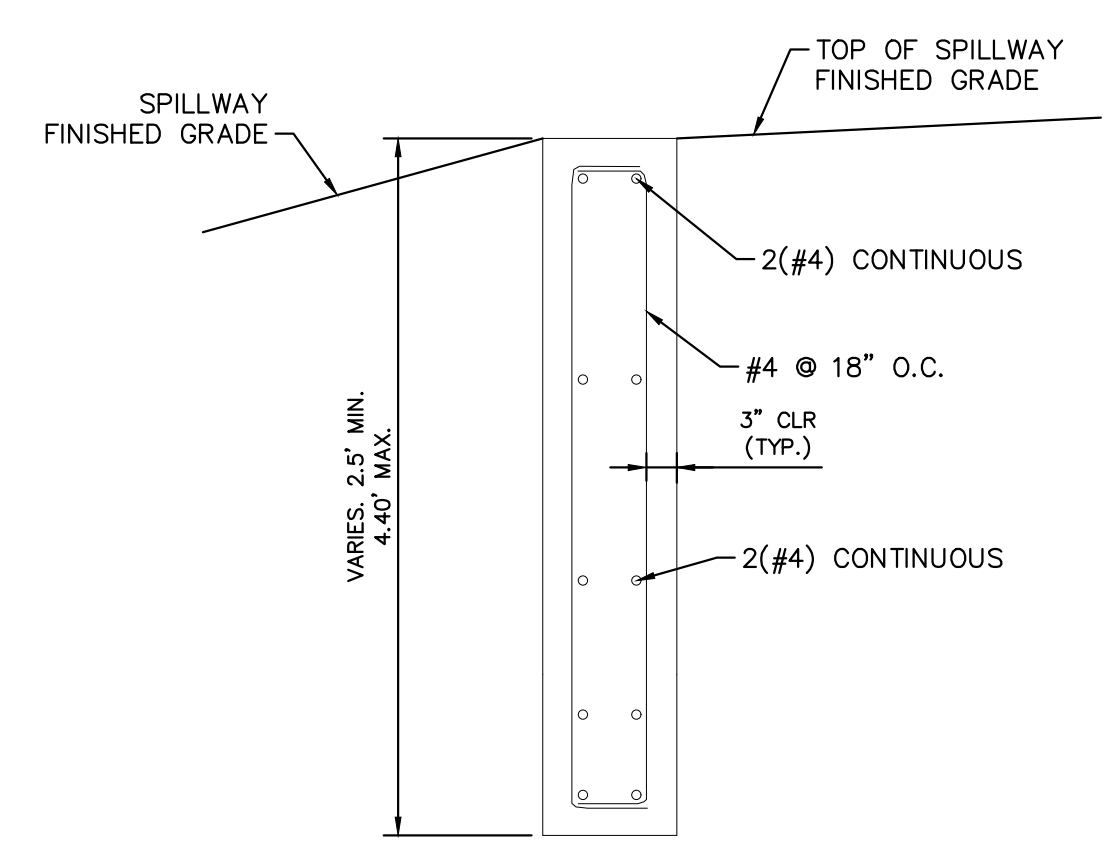
Computer File Information	Sheet Revisions	Colorado Department of Transportation	STANDARD PLAN NO.
Creation Date: 07/31/19	Date: _____	2829 West Howard Place	M-604-10
Designer Initials: JBK	Comments: _____	CDOT HQ, 3rd Floor	Standard Sheet No. 1 of 1
Last Modification Date: 07/31/19		Denver, CO 80204	
Detailer Initials: LTA		Phone: 303-757-9021 FAX: 303-757-9888	
CAD Ver.: MicroStation V8	Scale: Not to Scale	Units: English	Project Sheet Number: _____



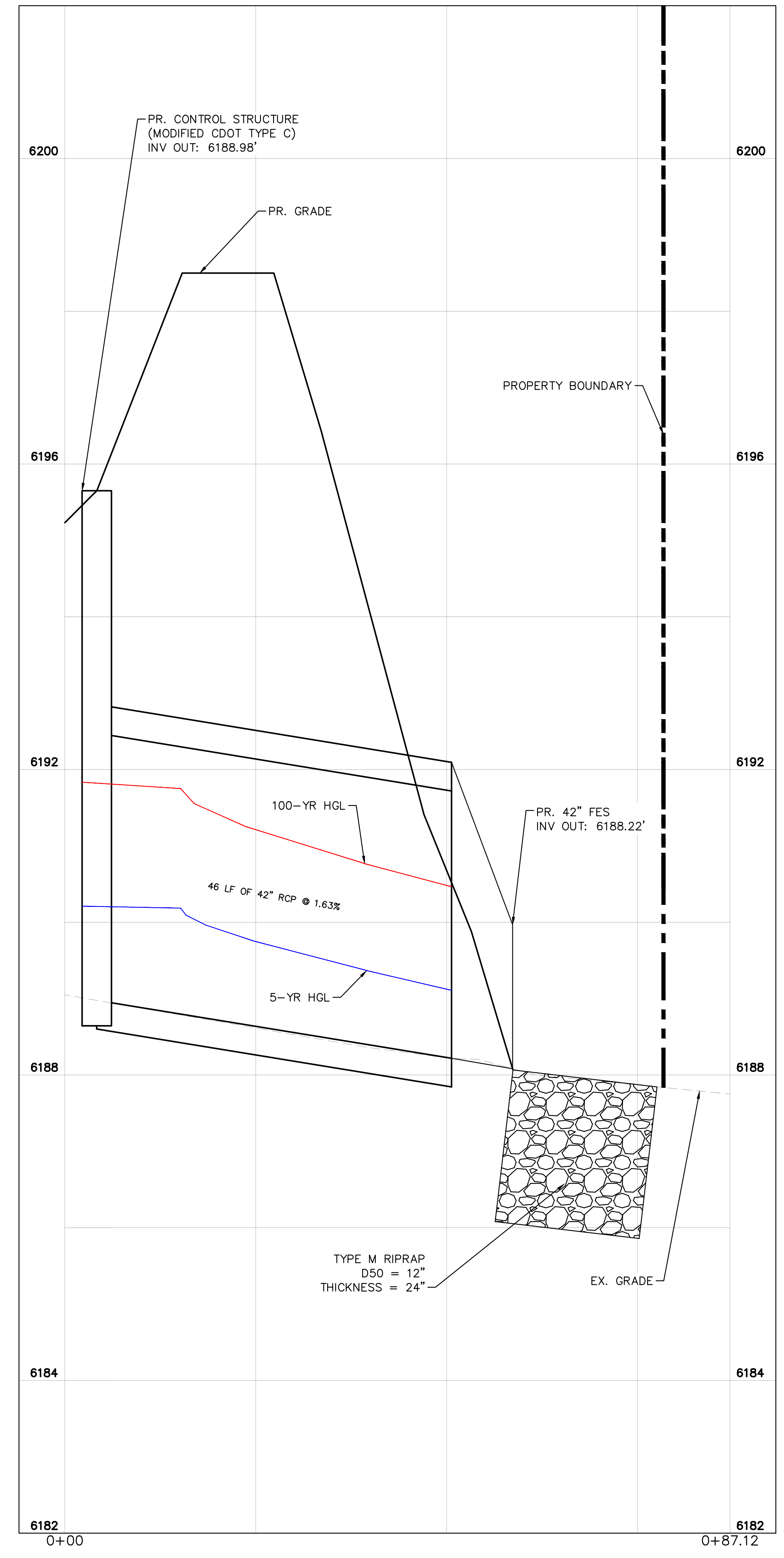
EMERGENCY SPILLWAY PROFILE VIEW
1"=10'



EMERGENCY SPILLWAY TYPICAL SECTION
1"=10'

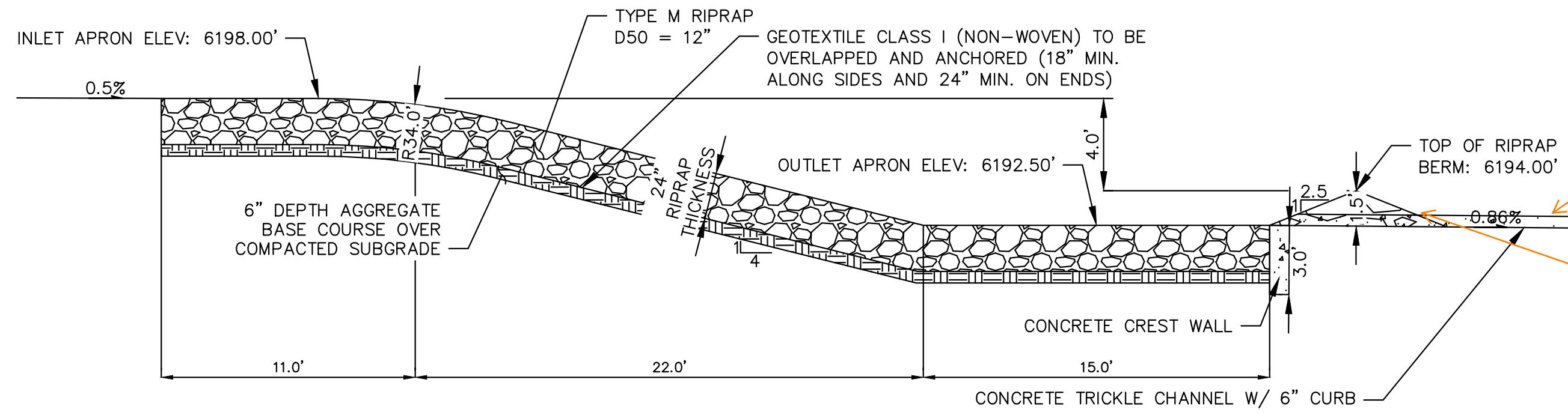


SECTION CREST WALL DETAIL
N.T.S.



POND OUTFALL PIPE PROFILE
1"=10'

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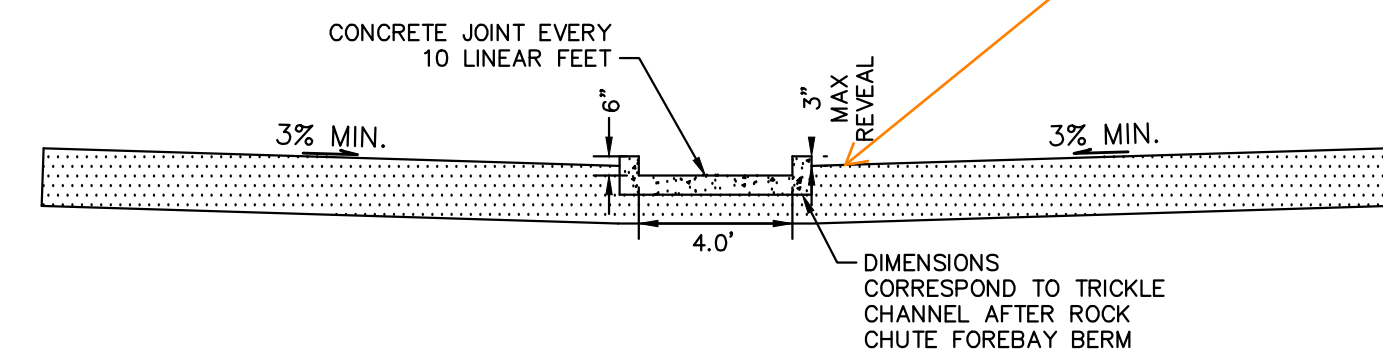


ROCK CHUTE PROFILE - POND TRICKLE CHANNEL APPLICATION
1" = 5'

Where is the proposed grade in this interface? Clarify how this works and maintains a pond bottom slope of 3% to the top of the trickle channel.

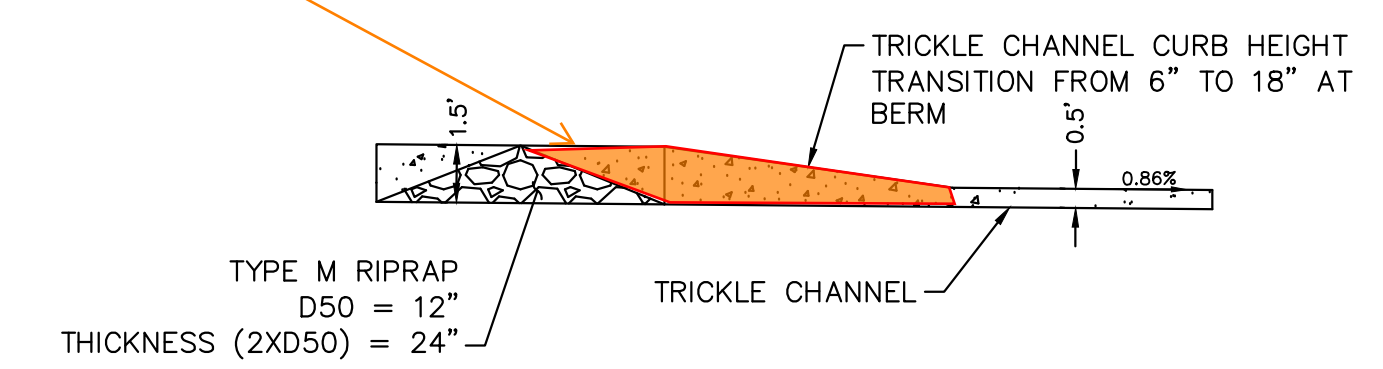
These details do not match, please revise to remove discrepancy.

Adding a detail that shows the transition from forebay to trickle channel would be really helpful. Also, it would help to add a note and/or linework that shows the pond bottom throughout each detail here.

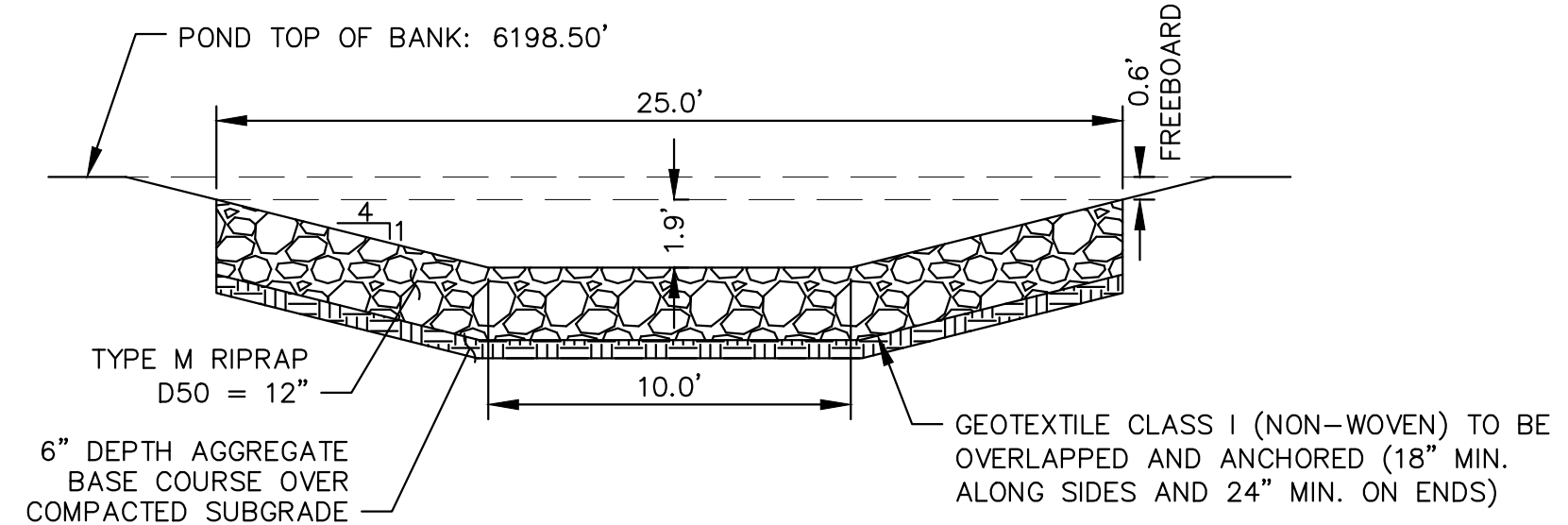


TRICKLE CHANNEL - TYPICAL SECTION
1" = 5'

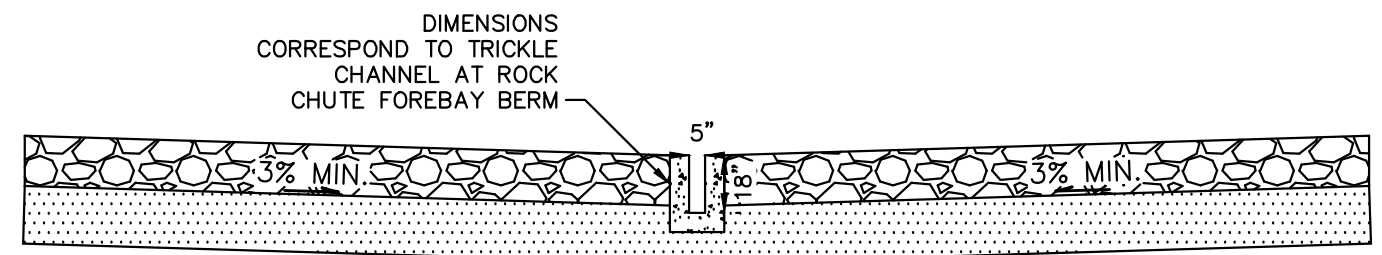
Pond bottom should meet the top of trickle channel to avoid erosion problems. We commonly see issues where if the pond bottom isn't graded correctly, erosion will continue along the full length of the trickle channel and the flow bypasses the trickle channel.



TRICKLE CHANNEL - PROFILE
1" = 5'

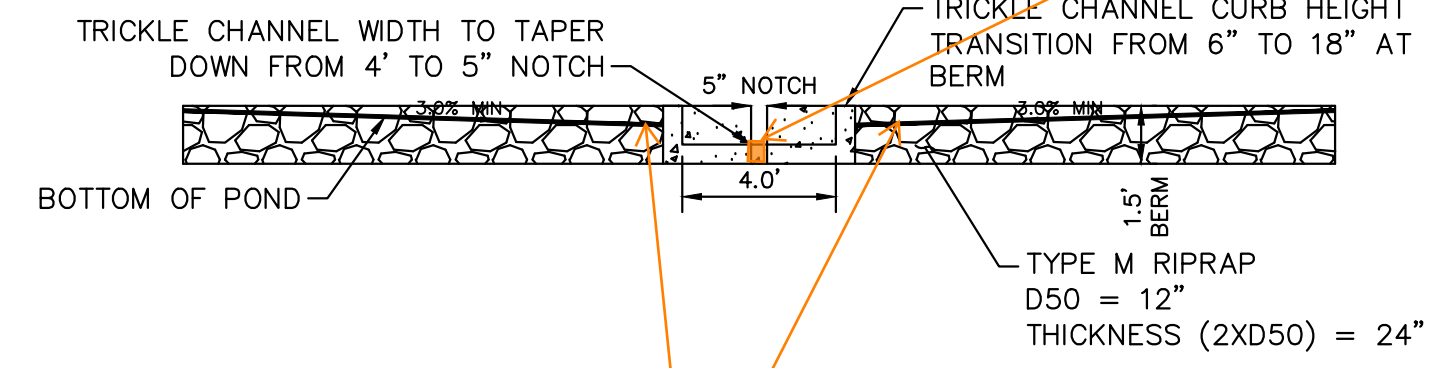


ROCK CHUTE - TYPICAL SECTION
1" = 5'



ROCK CHUTE TYPICAL SECTION - NOTCH DETAIL
1" = 5'

The bottom of the forebay notch should be at the same elevation as the flow line of the trickle channel. But this detail shows the notch extending down below the flowline of the TC, such that the forebay would hold water. Please revise.



ROCK CHUTE TYPICAL SECTION - FOREBAY BERM/TRICKLE CHANNEL
1" = 5'

Bottom of pond has to be graded to the top of the trickle channel. Doing so on this detail will still create a transition that needs to be shown more clearly (per my comments on the last review). Make sure that the area just downstream of the forebay berm does not hold water (ie. drains to the trickle channel).

Table 1: Riprap Gradation

Riprap Designation	% Smaller Than Given Size By Weight	Intermediate Rock Dimension (inches)	d ₅₀ * (inches)
Type VL	70 - 100	12	6**
	50 - 70	9	
	35 - 50	6	
	2 - 10	2	
Type L	70 - 100	15	9**
	50 - 70	12	
	35 - 50	9	
	2 - 10	3	
Type M	70 - 100	21	12**
	50 - 70	18	
	35 - 50	12	
	2 - 10	4	
Type H	70 - 100	30	18
	50 - 70	24	
	35 - 50	18	
	2 - 10	6	
Type VH	70 - 100	41	24
	50 - 70	33	
	35 - 50	24	
	2 - 10	9	

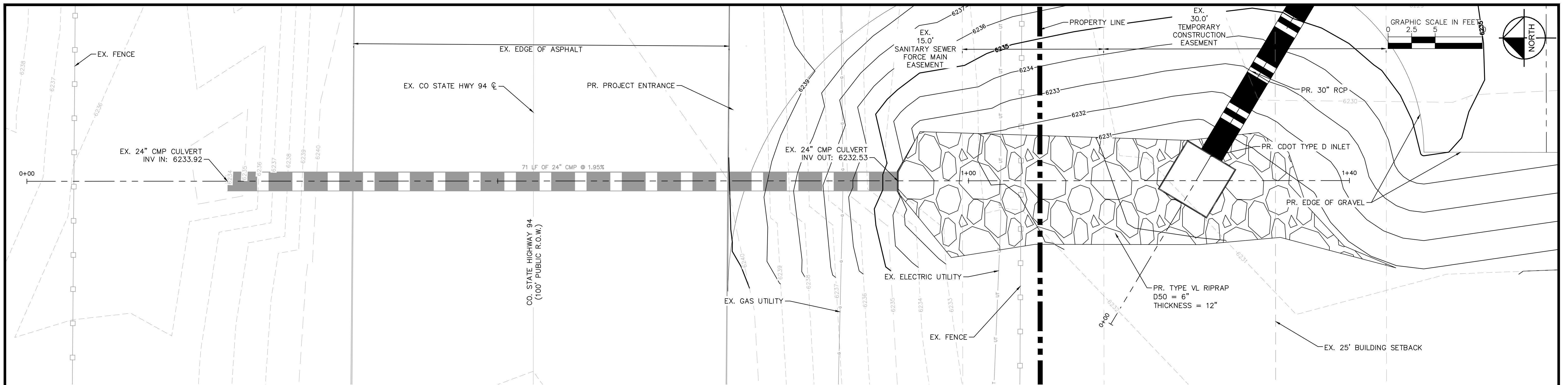
*d₅₀ = Mean Particle Size

**Mix VL, L and M riprap with 35% topsoil (by volume) and bury it with 4 to 6 inches of topsoil, all vibration compacted, and revegetate.

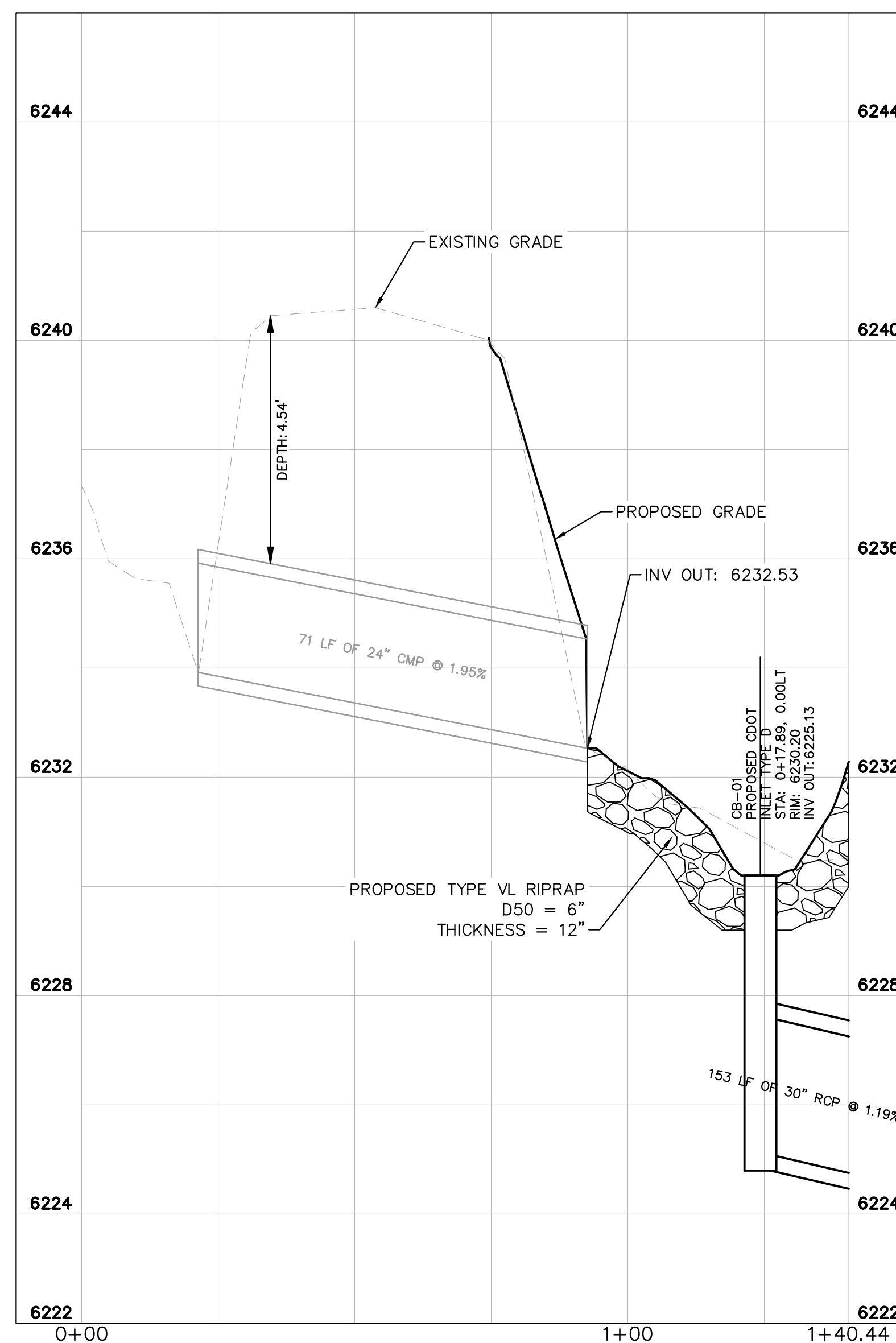


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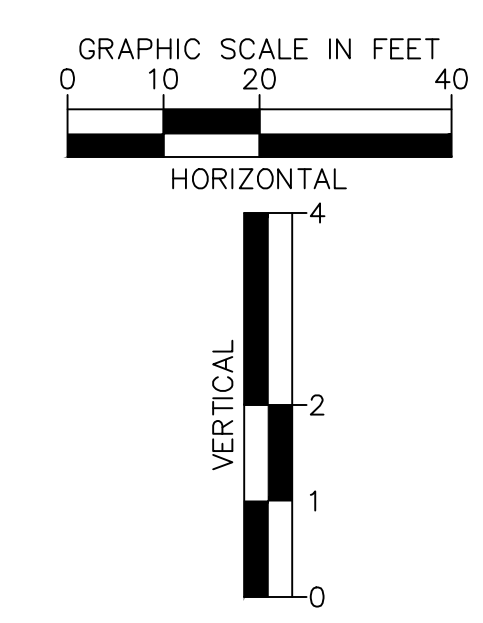
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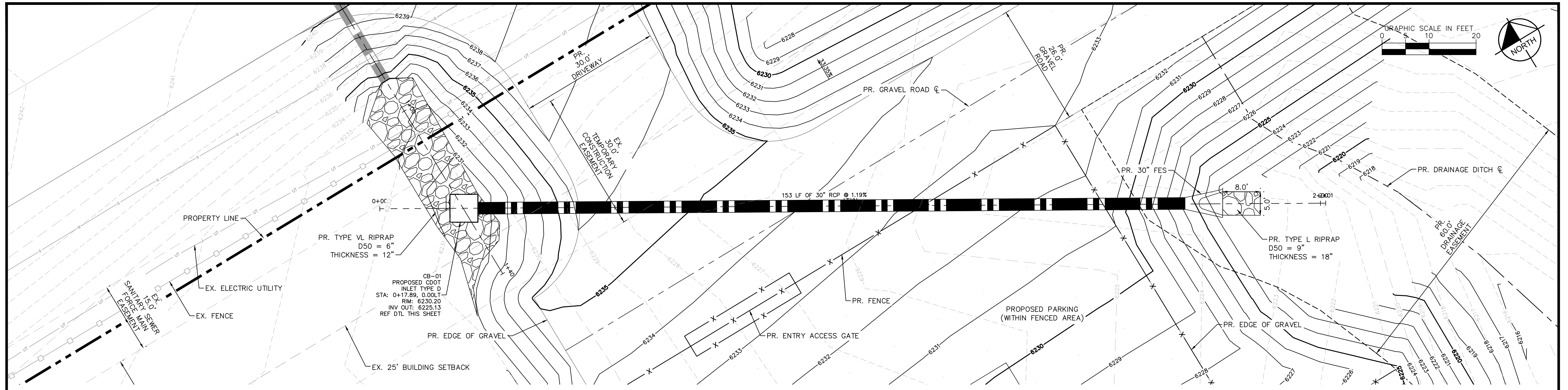


EXISTING OFFSITE 24" CULVERT WITH PROPOSED EXTENSION PLAN VIEW

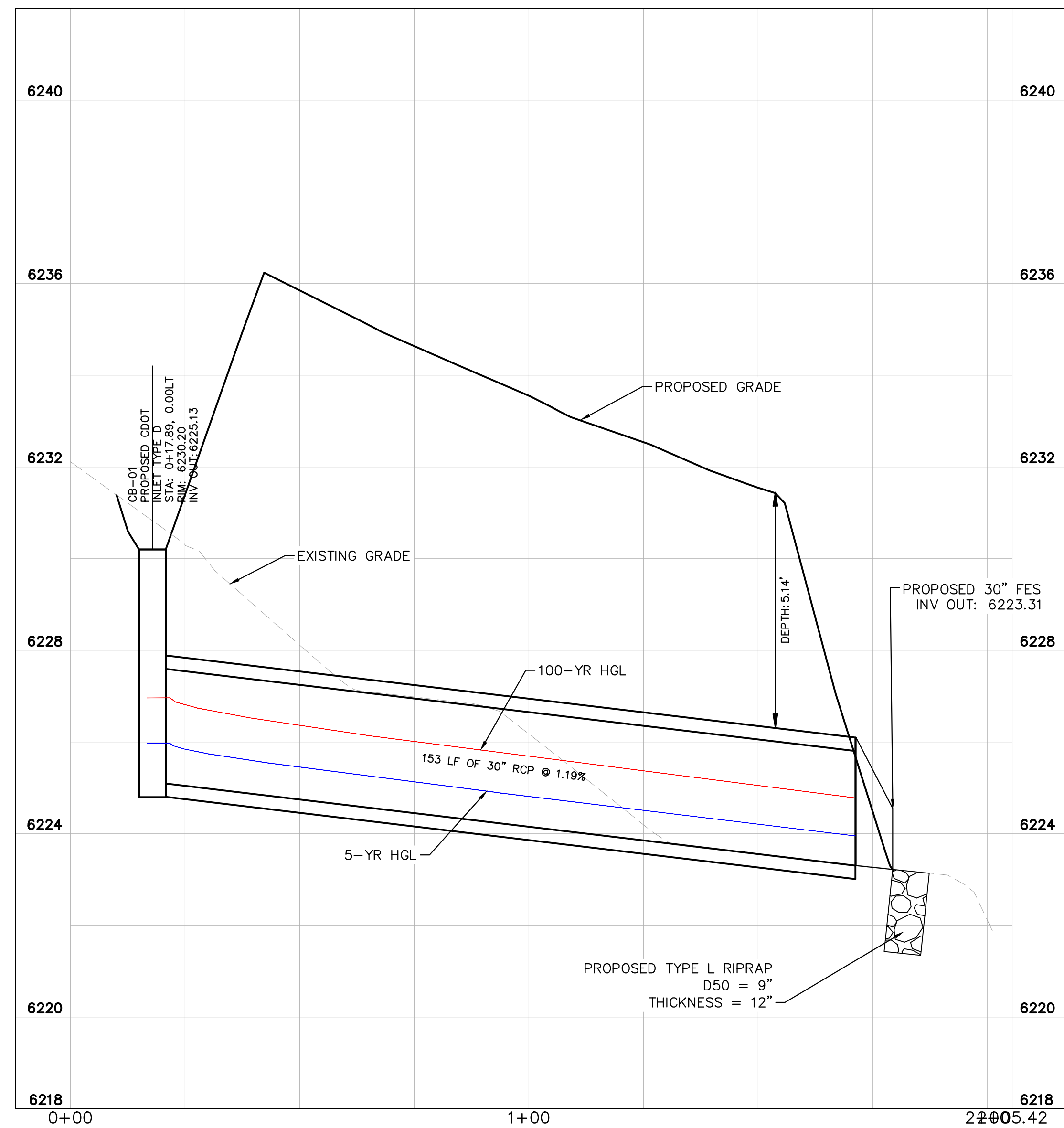


EXISTING OFFSITE 24" CULVERT WITH PROPOSED EXTENSION PROFILE VIEW

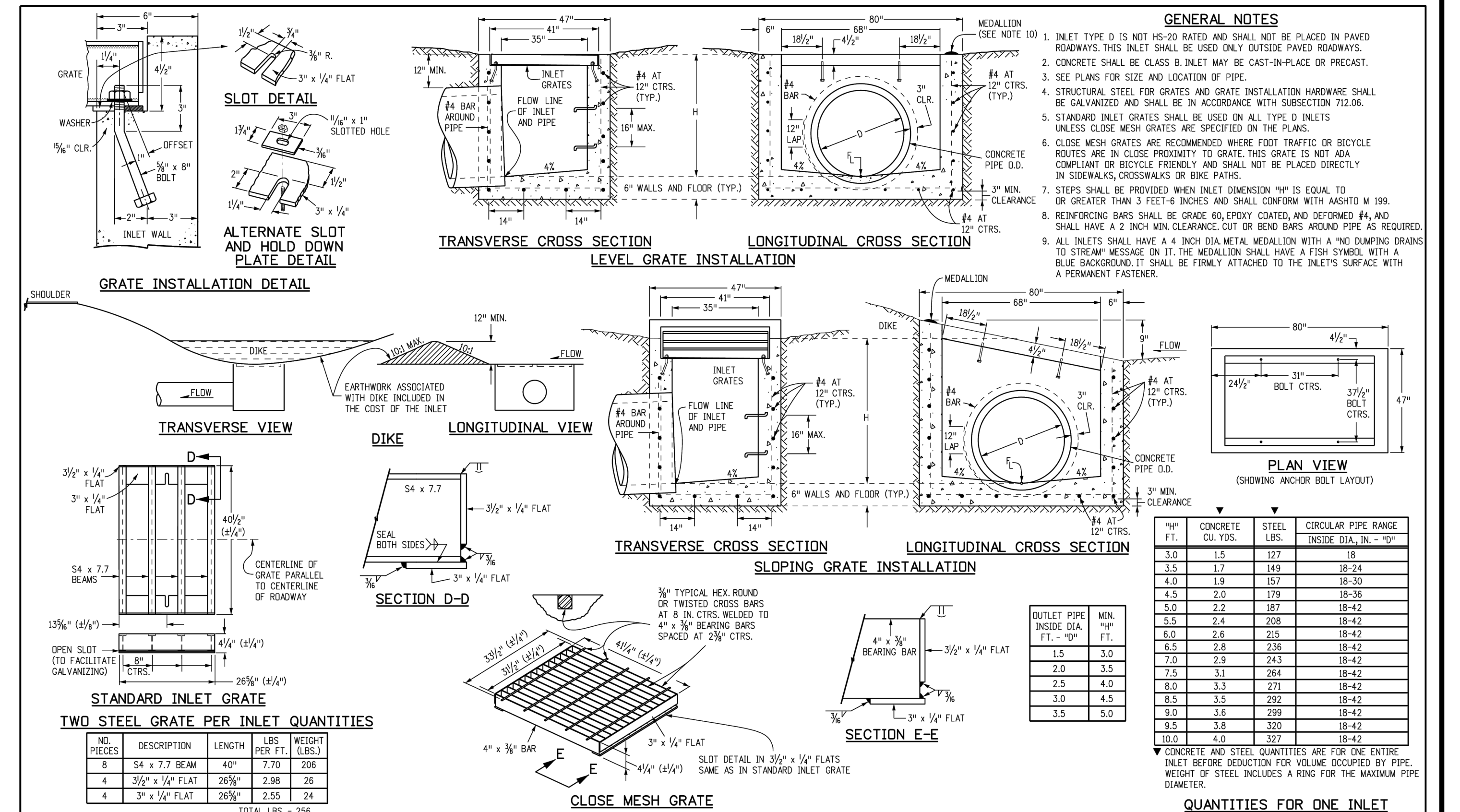




PROPOSED 30" CULVERT PLAN VIEW



PROPOSED 30" CULVERT PROFILE VIEW



STANDARD INLET GRATE

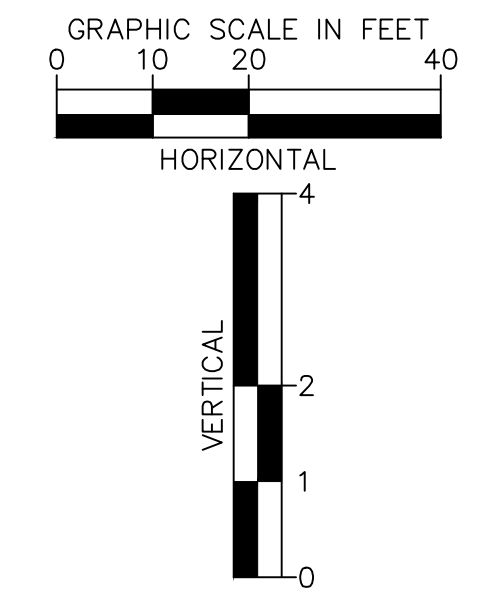
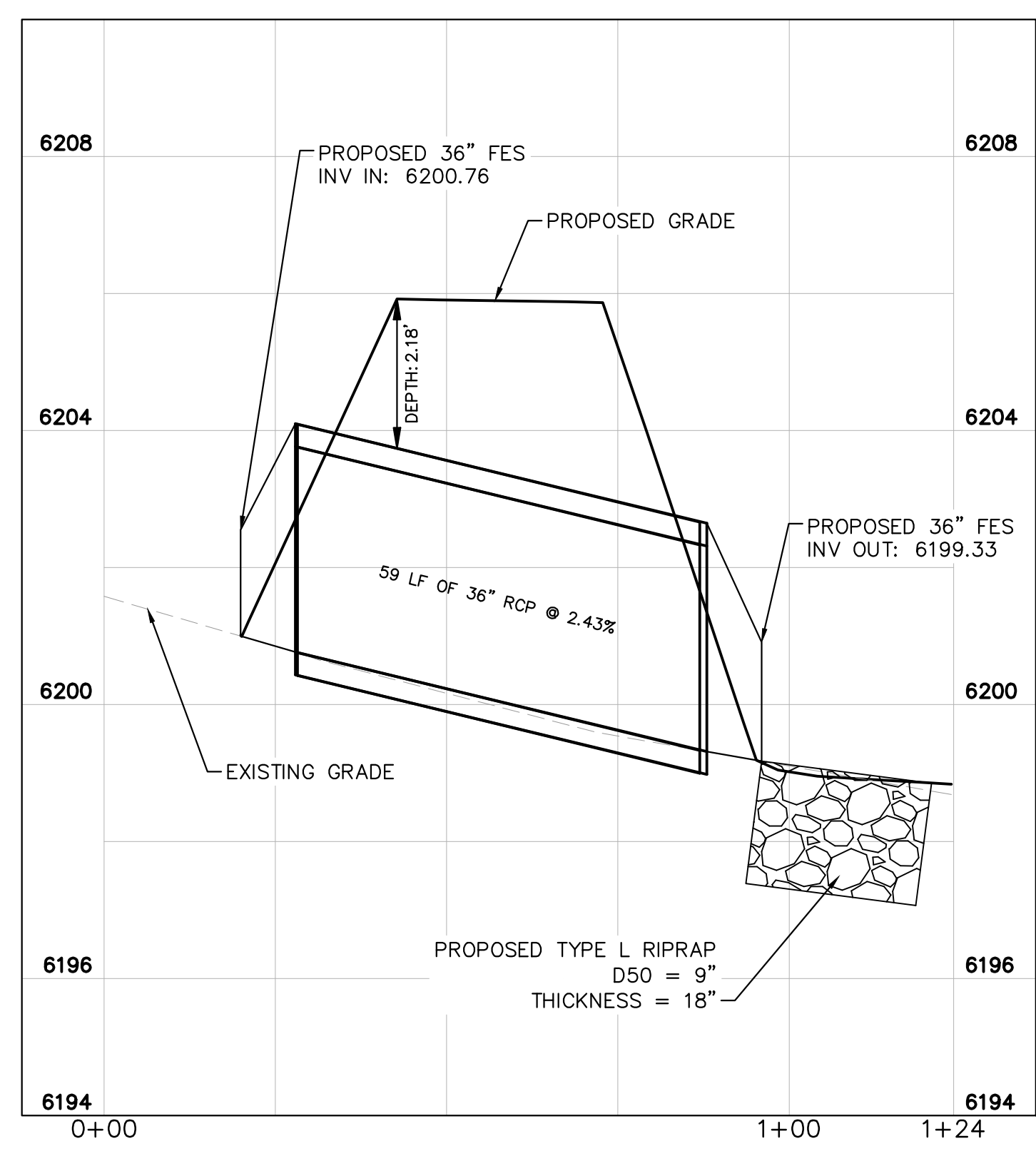
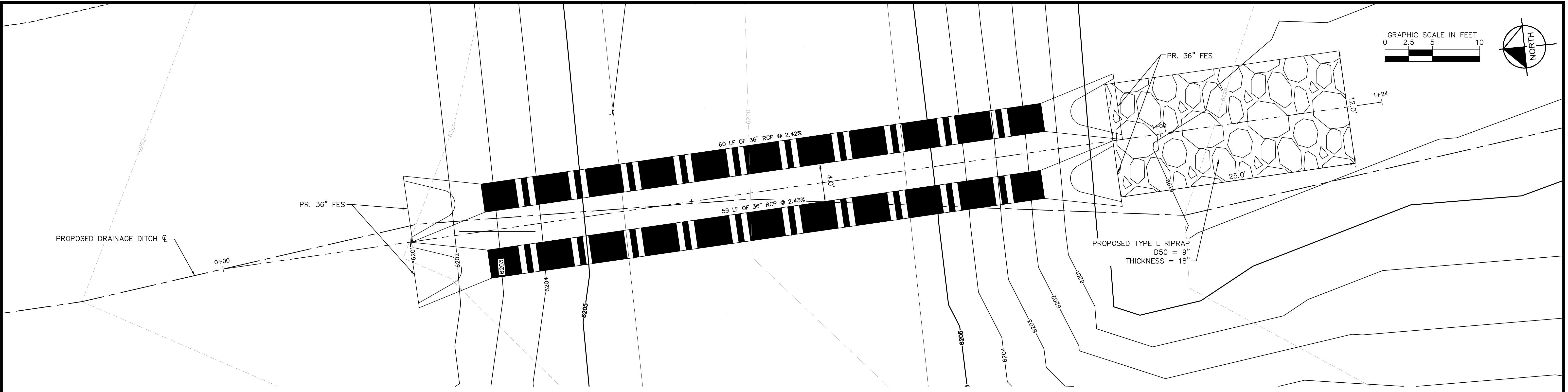
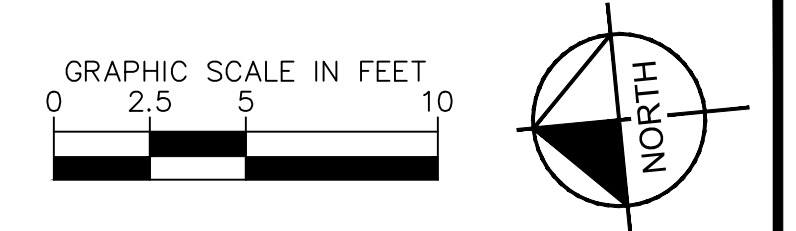
TWO STEEL GRATE PER INLET QUANTITIES

NO. PIECES	DESCRIPTION	LENGTH PER FT.	WEIGHT (LBS.)
8	S4 x 7.7 BEAM	40"	206
4	3 1/2" x 1/2" FLAT	26 5/8"	26
4	3" x 1/2" FLAT	26 5/8"	24
			TOTAL LBS. = 256

QUANTITIES FOR ONE INLET

INLET TYPE	CONCRETE CU. YDS.	STEEL LBS.	CIRCULAR PIPE RANGE INSIDE DIA. IN. - 10"
3.0	1.5	127	18
3.5	1.7	149	18-24
4.0	1.9	157	18-30
4.5	2.0	179	18-36
5.0	2.2	187	18-42
5.5	2.4	208	18-42
6.0	2.6	215	18-42
6.5	2.8	236	18-42
7.0	2.9	243	18-42
7.5	3.1	254	18-42
8.0	3.3	271	18-42
8.5	3.5	292	18-42
9.0	3.6	299	18-42
9.5	3.8	320	18-42
10.0	4.0	327	18-42

<p>Computer File Information</p> <p>Creation Date: 07/31/19 Designer Initials: JBK Last Modification Date: 07/31/19 Detailer Initials: LTA CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English</p>	<p>Sheet Revisions</p> <table border="1"> <tr> <th>Date:</th> <th>Comments:</th> </tr> <tr> <td> </td> <td> </td> </tr> </table>	Date:	Comments:			<p>Colorado Department of Transportation 2829 West Howard Place CDOT HQ, 3rd Floor Denver, CO 80204 Phone: 303-757-9021 FAX: 303-757-9868 Project Development Branch JBK</p>	<p>INLET, TYPE D</p> <p>Issued by the Project Development Branch July 31, 2019</p>	<p>STANDARD PLAN NO. M-604-11</p> <p>Standard Sheet No. 1 of 1</p> <p>Project Sheet Number:</p>
Date:	Comments:							



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CO STATE HIGHWAY 94
(100' PUBLIC RIGHT-OF-WAY)
(REC. NO. 219151478)

12135 HIGHWAY 94
OWNER: FAIR DINKUM TRUST
PARCEL NO. 440000239

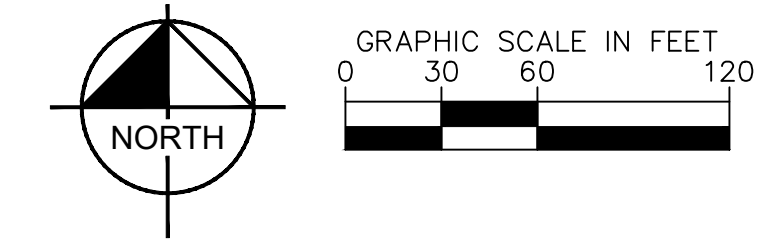
N00°22'05"W 1214.98'

N89°49'21"E 1242.62'

S89°48'31"W 1246.37'
(BASIS OF BEARINGS)

HIGHWAY 94
OWNER: MILLER, GARY D &
VETTE, MARIE & VETTE, TAD
PARCEL NO. 440000061

LIGHTING SUMMARY TABLE				
AREA	AVG. ILLUMINANCE (FC)	MAX (FC)	MIN (FC)	UNIFORMITY (AVG/MIN)
LARGE PARKING LOT	2.78	27.20	0.10	27.80
SMALL PARKING LOT	2.99	27.10	0.10	29.90
DRIVEWAYS/ENTRY	2.50	14.90	0.10	25.00
STANDARD	1.25			6.00



LEGEND
 PROPOSED LUMINAIRE

Per § 6.2.3.B.1.d, Maximum on-site lighting levels shall not exceed 10 foot candles.
 Per § 6.2.3.B.1.e, Light levels measured at the property line of the development site adjacent to public right of way shall not exceed 0.1 foot candles.

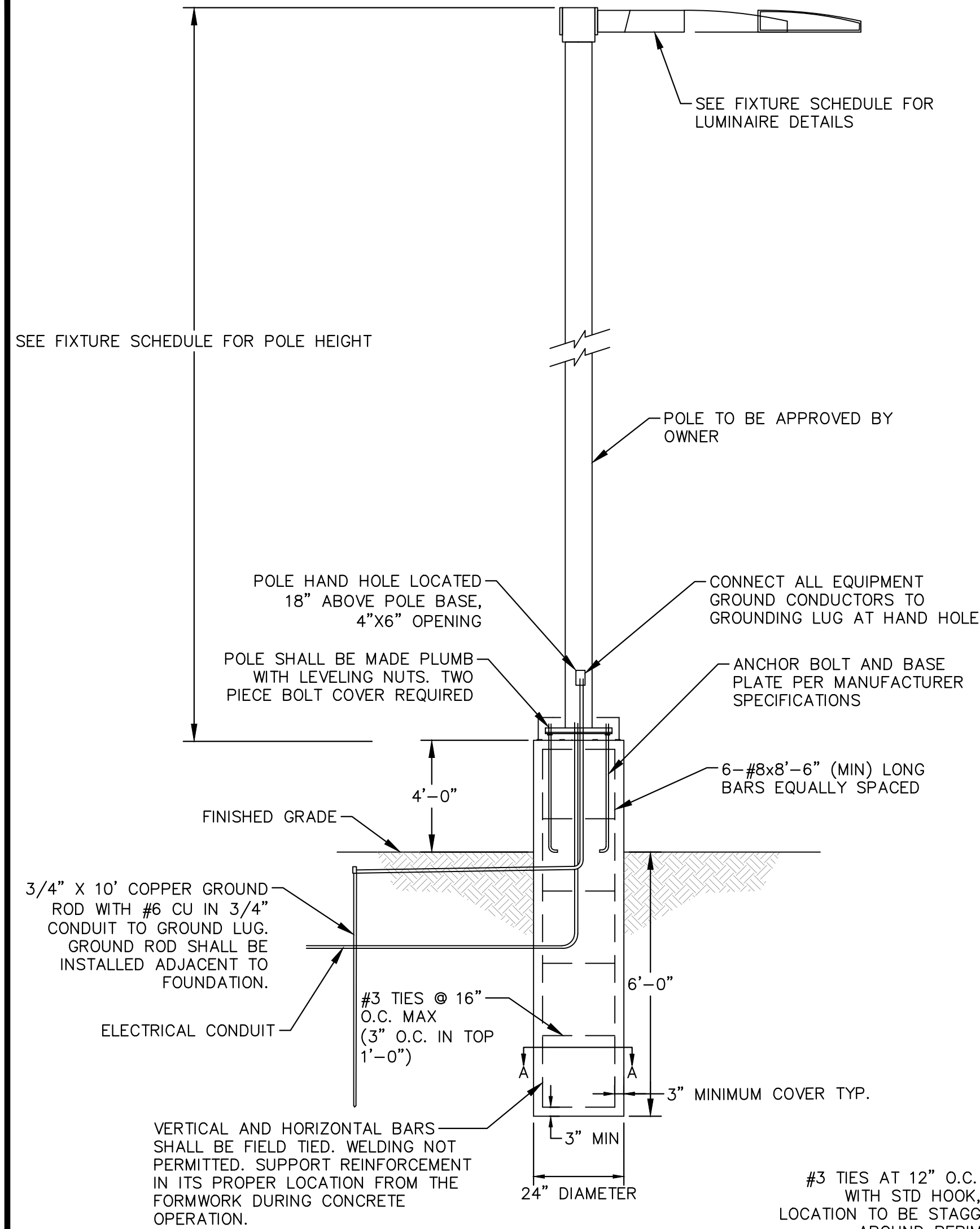
Kimley»Horn

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COLORADO SPRINGS, COLORADO 80903 (719) 453-0180

PHOTOMETRIC PLAN
SHEET 16 OF 20

UDON SOUTH - COUNTY PROJECT NO. SDP XX-XXXXX

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- NOTES:**
- 4000 PSI MIN. 28 DAY COMPRESSIVE STRENGTH CONCRETE WITH GRADE 60 REINFORCING STEEL
 - IF WATER IS PRESENT IN HOLE, REMOVE BEFORE POURING CONCRETE.
 - FOUNDATION EXCAVATION SHALL BE BY 24" AUGER IN UNDISTURBED OR PROPERLY COMPACTED FILL PER SPECIFICATIONS.
 - FOUNDATION HAS BEEN DESIGNED FOR AN ALLOWABLE BEARING CAPACITY OF 1500 PSF.
 - FOUNDATION HAS BEEN DESIGNED FOR A MINIMUM ALLOWABLE LATERAL SOIL PRESSURE OF 100 PCF.

1 POLE FOUNDATION DETAIL
SCALE: NTS

91081AL 100/150/185 Watt Selectable Wattage & Color Temperature LED Area Light

Material: Aluminum construction with integrated fins to maximize heat dissipation.
 Color: Dark Bronze.
 Preset Power: 150 Watts
 Voltage: 120-277 Volt standard.
 Preset Color Temperature: 5000K
 Light Distribution: Type 3 standard.
 Type 4 and Type 5 options as special order.
 Photocell: Photocell is optional.
 Dimming: 0-10V Dimming Capable.
 Dimming control not provided (field install).
 ETL Listing: ETL Listed for Wet Locations.
 DLC Listing: DLC Premium.
 IP Rating: IP65
 EPA Rating: 0.55
 Warranty: 5 Years.
 Weight: 10 lbs.

POWER (W)	LOW	MID	HIGH
AMPS	0.87 @ 120V/0.38 @ 277V	1.31 @ 120V/0.57 @ 277V	1.62 @ 120V/0.70 @ 277V
COLOR TEMPERATURE (K)	3000 4000 5000	3000 4000 5000	3000 4000 5000
LUMENS	14,500 16,000 15,000	21,750 24,000 22,500	26,825 29,600 27,750
LUMENS/WATT	145 160 150	145 160 150	145 160 150

Disclaimer: All dimensions and specifications are subject to change without any notice.

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2 LUMINAIRE CUTSHEET
SCALE: NTS

547103 14 Foot Square Steel Light Pole, 4 Inch Wide, 11 Gauge

Product Description:
 Pole Top Options: A removable pole cap is provided if the pole is drilled for attaching light fixtures. The drill pattern and drill orientation needs to be provided by the customer unless Energy Light fixtures are used for the project. If tenon option is selected, a steel tenon will be provided.
 Pole Shaft: 4 inch square 11 gauge.
 Pole shaft is weldable-grade, cold-rolled, commercial quality carbon steel tubing conforming to ASTM A500 Grade B. All welds conform to AWS D1.2 using ER70S-6 electrodes.
 Handhole: Reinforced, 3" X 5" size handhole is located at 18 inches from the base. Grounding lug incorporating a tapped 1/2"-13 NC hole is provided.
 Color: Commercial grade, super durable powder coat is the standard option.
 Dark bronze, white and black colors are provided at no extra charge. Other colors and custom colors options are available at a surcharge. Hot dip galvanizing is available with a surcharge and extended lead time. Powder coated, galvanized poles are also available as a premium option.
 Anchor Bolts: A set of 4 galvanized steel anchor bolts is provided with each pole assembly. Each anchor bolt includes 2 nuts and 2 washers. Top portion of the anchor bolt is threaded for securing and leveling the pole with the provided nuts and washers. An actual size paper anchor bolt template is provided.
 Bolt Circle: 8-1/2" (Bolt Circle Range 8"-9")
 Base Cover: Two-piece ABS plastic base cover is provided.
 Other Options: The following options are available:
 Vibration dampener, custom tenon sizes, custom colors, electric/GFI outlets, custom pole heights, additional handholes, UL compliant handholes and custom base plate dimensions.
 Warranty: 5 Years.
 Foundation design: Foundation should be designed by an engineer familiar with local soil and wind conditions as well as local code where the pole(s) will be installed.

MAXIMUM EPA (Square Feet)						Pole Weight (lbs)
90 mph	100 mph	110 mph	120 mph	130 mph	140 mph	
17.0	13.2	12.1	9.7	7.8	6.3	100

Disclaimer: All dimensions and specifications are subject to change without any notice.

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3 POLE CUTSHEET
SCALE: NTS

LUMINAIRE SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER AND MODEL	VOLTAGE	WATTAGE	LUMENS	FINISH	POLE MANUFACTURER	POLE MODEL	POLE FINISH	MOUNTING HEIGHT
	SHORT ARM STYLE LUMINAIRE	ENERGY LIGHT INC POWER SELECTABLE LED AREA LIGHT CATALOG #91081AL	120-277V	100 - 185 W	14,500 - 27,750 LUMENS	DARK BROZE	ENERGY LIGHT INC	547103	DARK BRONZE	18'-0"
	SHORT ARM STYLE LUMINAIRE	ENERGY LIGHT INC POWER SELECTABLE LED AREA LIGHT CATALOG #91081AL	120-277V	200 - 370 W	29,000 - 55,500 LUMENS	DARK BROZE	ENERGY LIGHT INC	547103	DARK BRONZE	18'-0"

CO STATE HIGHWAY 94
(100' PUBLIC RIGHT-OF-WAY)
(REC. NO. 219151478)

EX. FENCE (TYP.)

EX. UNDERGROUND UTILITY

EX. GAS MAIN

30.0' TEMPORARY
CONSTRUCTION
EASEMENT

25.0' TRAIL EASEMENT

EXISTING 24" CMP CULVERT

PR. STOP SIGN
REF DTL SHEET #

EXISTING ACCESS
TO BE CLOSED

EXISTING CO STATE HWY 94

EXISTING ACCESS
TO BE CLOSED

PROPERTY LINE

EXISTING EDGE OF ASPHALT

EX. WATER MAIN

EX. SANITARY MAIN

25.0' BUILDING
SETBACK
(TYP.)

PROPOSED GATE

PR. VEHICLE
PULL-OFF AREA

PR. ADA PARKING
W/ 6' SIDEWALK
REF. SHEET #

PR. ROAD

EXISTING NATIVE
GRASSLAND

EXISTING BUILDING
TO BE US AS
LEASING OFFICE
(4,172 SF)

EXISTING 20'
ELECTRIC ESMT.

EXISTING ELECTRIC POLE

EXISTING ELECTRIC POLE

EXISTING ELECTRIC POLE

EXISTING ELECTRIC POLE

EX. FENCE (TYP.)

PR. FENCE (TYP.)

50.0'
RESIDENTIAL
STORAGE
HEIGHT
SEPARATION

35.0'
DRIVE
AISLE

50.0'
DRIVE
AISLE

35.0'
DRIVE
AISLE

26.0'
DRIVE
AISLE

30.0'

12135 HIGHWAY 94
OWNER: FAIR DINKUM TRUST
PARCEL NO. 440000239

PROPOSED GATE

EXISTING BUILDING STRUCTURE

PR. FENCE (TYP.)

PROPERTY LINE

50.0'
RESIDENTIAL
STORAGE
HEIGHT
SEPARATION

Landscape buffering is required between the subject lot and the residential zone district to the south.

PR. FENCE (TYP.)

PR. 42" CMP
CULVERT W/ FES

PROPOSED GATE

PR. POND MAINTENANCE ACCESS ROAD

PR. OPAQUE FENCING
(TYP.)

PR. FULL SPECTRUM
EXTENDED DETENTION BASIN

PR. RIP RAP EMERGENCY
SPILLWAY

PROPERTY LINE

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT. / WTR USE	SIZE / CAL	WIDTH	HEIGHT
DECIDUOUS TREES							
⊙	AF	29	ACER GINNALA 'FLAME' FLAME AMUR MAPLE	B & B	1.5" OA, 3-STEM MIN.	15'-20'	15'-25'
⊙	OD	14	CELTIS OCCIDENTALIS 'CHICAGOLAND' CHICAGOLAND WESTERN HACKBERRY	B & B	2.5" CAL MIN	20'-40'	50'-60'
⊙	CP	22	CRATAEGUS PHAENOPYRUM WASHINGTON HAWTHORN	B & B	1.5" CAL MIN	15'-25'	20'-25'
EVERGREEN TREES							
⊙	JS	20	JUNIPERUS SCOPULORUM ROCKY MOUNTAIN JUNIPER	B & B	6' HGT.	8'-12'	20'-40'
DECIDUOUS SHRUBS							
⊙	BT	44	BERBERIS THUNBERGII 'ATROPURPUREA' RED LEAF JAPANESE BARBERY	5 GAL	SEE PLAN	4'-6'	4'-6'
⊙	EN	18	ERICAMERIA NAUSEOSA GLABRATA TALL GREEN RABBITBRUSH	5 GAL	SEE PLAN	4'-6'	3'-6'
⊙	ES	63	ERICAMERIA NAUSEOSA VAR. SPECIOSA TALL BLUE RABBITBRUSH	5 GAL	SEE PLAN	2'-6'	2'-6'
⊙	FC	50	FRANGULA ALBUS 'COLUMNARIS' TALL HEDGE BUCKTHORN	5 GAL	SEE PLAN	3'-5'	8'-12'
⊙	PA	65	PEROVSKIA ATRIPLICIFOLIA RUSSIAN SAGE	5 GAL	SEE PLAN	3'-5'	3'-5'
EVERGREEN SHRUBS							
⊙	JB	12	JUNIPERUS SABINA 'BROADMOOR' BROADMOOR JUNIPER	5 GAL	SEE PLAN	6'-8'	12'-18'
⊙	JP	18	JUNIPERUS HORIZONTALIS 'PRINCE OF WALES' PRINCE OF WALES JUNIPER	5 GAL	SEE PLAN	8'-10'	4'-6'
GROUND COVERS							
⊙	SEED	378,745 SF	EPC LOW GROW MIX TILL SOIL TO A MIN. DEPTH OF 8" PRIOR TO INSTALLATION. INSTALL PER TABLE 5.2. SUBMIT SUPPLIER CUT-SHEET FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. GORSLA HAIR WOOD MULCH SUBMIT SAMPLE FOR APPROVAL PRIOR TO INSTALLATION.	SEED	21 LBS / ACRE		
⊙	WM	15,516 SF		WOOD MULCH	4"	YES	PIONEER SAND

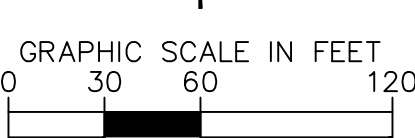
§6.2.2.G.1.e.ii Site-Specific Landscaping Standards. The site-specific landscaping shall reflect a combination of berms, shrubs, trees, fences or walls which will provide, at maturity, a minimum 6 foot high, 100% opaque screening for the outside storage area.

Roadway tree requirement:
1,242 feet/20 = 62 roadway trees.

12455 HIGHWAY 94
OWNER: EMPRISE ACQUISITIONS LLC
PARCEL NO. 440000056

LANDSCAPE SETBACKS AND BUFFERS		
STREET NAME OR BOUNDARY:	HIGHWAY 94	WEST BNDY
ZONE DISTRICT BOUNDARY:	NO	NO
STREET CLASSIFICATION:	EXPRESSWAY	N/A
SETBACK DEPTH REQUIRED / PROVIDED:	25' / 25'	25' / 25'
LINEAR FOOTAGE:	1,243'	1,215'
NUMBER OF TREES REQ. / PROV.	63 / 43	49 / 42
SHRUB SUBSTITUTES REQ. / PROV.	200 / 200	70 / 70
PLANT ABBREVIATION DENOTED ON PLAN:	H94	WB
% GROUND PLANE VEG. REQ. / PROV.	75% / 75%	75% / 75%

*ALTERNATIVE COMPLIANCE REQUESTED FOR INTERNAL AND PARKING AREA PLANTING.



LANDSCAPE PLAN
SHEET 18 OF 20



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2 NORTH NEVADA AVENUE, SUITE 900
COLORADO SPRINGS, COLORADO 80903 (719) 453-0180

HIGHWAY 94
OWNER: MILLER, GARY D &
VETTE, MARIE & VETTE, TAD
PARCEL NO. 440000061

N FRANCEVILLE COAL MINE RD
OWNER: MILLER, GARY D & VETTE, TAD
PARCEL NO. 4400000310

GENERAL LANDSCAPE SPECIFICATIONS

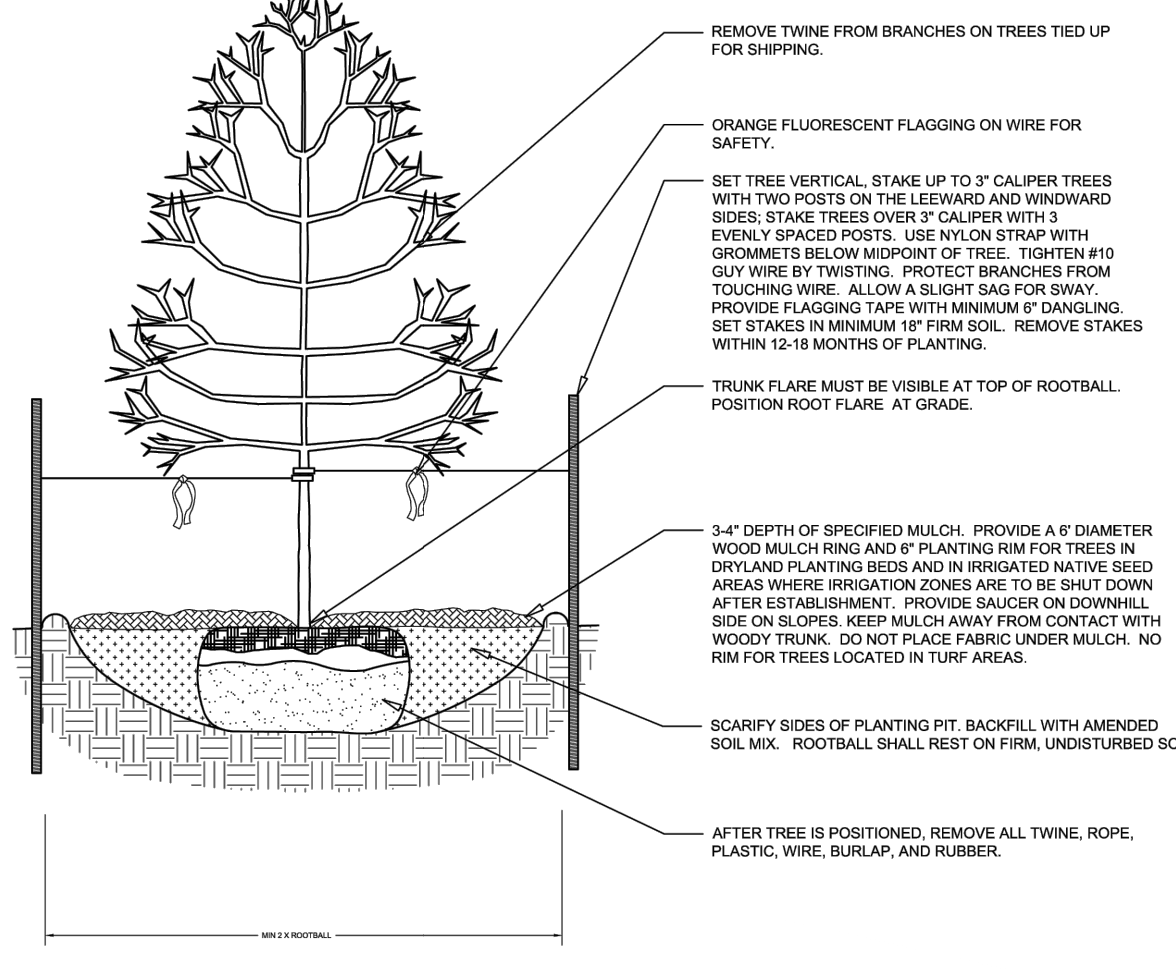
<p>A. SCOPE OF WORK</p> <ol style="list-style-type: none"> 1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE FERTILIZATION OF THIS PROJECT AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN. 2. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER. <p>B. PROTECTION OF EXISTING STRUCTURES</p> <ol style="list-style-type: none"> 1. ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED AND DESIGNATED TO REMAIN SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER. 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL NECESSARY BEST MANAGEMENT PRACTICES (BMP) DEVICES ACCORDING TO ALL REGULATORY AGENCY'S STANDARDS THROUGHOUT THE DURATION OF ALL CONSTRUCTION ACTIVITIES. 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MAINTENANCE OF TRAFFIC (MOT) THAT MAY BE REQUIRED FOR THE PROJECT. 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION. THE OWNER AND DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA, LOCATING ALL UNDERGROUND FACILITIES DURING CONSTRUCTION, THE SAFETY AND PROTECTION THEREOF; REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THE COST OF ALL WORK SHALL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. <p>C. PROTECTION OF EXISTING PLANT MATERIALS</p> <ol style="list-style-type: none"> 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC... THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRIP-LINE AND SPILLING OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP-LINE. NO MATERIALS SHALL BE BURNED ON SITE. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MIS-SHAPEN AND/OR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF FOUR HUNDRED DOLLARS (\$400) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES. CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER. 2. SEE TREE MITIGATION PLAN AND NOTES, IF APPLICABLE. 3. ALL TREES PROPOSED TO BE REMOVED WITHIN THE PUBLIC RIGHT-OF-WAY MUST BE COORDINATED WITH THE FORESTRY DEPARTMENT FOR PERMIT PRIOR TO TREE REMOVAL. <p>D. MATERIALS</p> <p>1. GENERAL</p> <p>MATERIAL SAMPLES LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL, ON SITE OR AS DETERMINED BY THE OWNER, UPON APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.</p> <table border="1"> <thead> <tr> <th>MATERIAL</th> <th>SAMPLE SIZE</th> </tr> </thead> <tbody> <tr> <td>MULCH</td> <td>ONE (1) CUBIC FOOT</td> </tr> <tr> <td>TOPSOIL MIX</td> <td>ONE (1) CUBIC FOOT</td> </tr> <tr> <td>PLANTS</td> <td>ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY)</td> </tr> </tbody> </table> <ol style="list-style-type: none"> 2. PLANT MATERIALS <ol style="list-style-type: none"> a. FURNISH NURSERY-GROWN PLANTS TRUE TO GENUS, SPECIES, VARIETY, CULTIVAR, STEM FORM, SHEARING, AND OTHER FEATURES INDICATED IN PLANT SCHEDULE SHOWN ON DRAWINGS AND COMPLYING WITH ANSI Z60.1 AND THE COLORADO NURSERY ACT, AND WITH HEALTHY ROOT SYSTEMS DEVELOPED BY TRANSPLANTING OR ROOT PRUNING. PROVIDE WELL-SHAPED, FULLY BRANCHED, HEALTHY, VIGOROUS STOCK, DENSELY FOLIATED WHEN IN LEAF AND FREE OF DISEASE, PESTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT. b. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. c. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE PROJECT LANDSCAPE ARCHITECT. ANY ROW TREES MUST BE APPROVED BY OFFICE OF THE CITY FORESTER. d. PROVIDE PLANTS OF SIZES, GRADES, AND BALL OR CONTAINER SIZES COMPLYING WITH ANSI Z60.1 AND COLORADO NURSERY ACT FOR TYPES AND FORM OF PLANTS REQUIRED. PLANTS OF A LARGER SIZE MAY BE USED IF ACCEPTABLE TO PROJECT LANDSCAPE ARCHITECT WITH A PROPORTIONATE INCREASE IN SIZE OF ROOTS OR BALLS. e. PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY. SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE. f. TREES WITH DAMAGED, CROOKED, OR MULTIPLE LEADERS; TIGHT VERTICAL BRANCHES WHERE BARK IS SQUEEZED BETWEEN TWO BRANCHES OR BETWEEN BRANCH AND TRUNK (INCLUDED BARK); CROSSING TRUNKS; CUT-OFF LIMBS MORE THAN 1/2 INCH (19 MM) IN DIAMETER, OR WITH STEM GIRDLING ROOTS WILL BE REJECTED. g. FURNISH TREES AND SHRUBS WITH ROOTS BALLS MEASURED FROM TOP OF ROOT BALL, WHICH SHALL BEGIN AT ROOT FLARE ACCORDING TO ANSI Z60.1 AND COLORADO NURSERY ACT. ROOT FLARE SHALL BE VISIBLE BEFORE PLANTING. h. LABEL AT LEAST ONE PLANT OF EACH VARIETY, SIZE, AND CALIPER WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF COMMON NAME AND FULL SCIENTIFIC NAME, INCLUDING GENUS AND SPECIES, INCLUDE NOMENCLATURE FOR HYBRID, VARIETY, OR CULTIVAR, IF APPLICABLE FOR THE PLANT AS SHOWN ON DRAWINGS. i. IF FORMAL ARRANGEMENTS OR CONSECUTIVE ORDER OF PLANTS IS SHOWN ON DRAWINGS, SELECT STOCK FOR UNIFORM HEIGHT AND SPREAD, AND NUMBER THE LABELS TO ASSURE SYMMETRY IN PLANTING. <p>E. SOIL MIXTURE</p> <ol style="list-style-type: none"> 1. CONTRACTOR SHALL TEST EXISTING SOIL AND AMEND AS NECESSARY IN ACCORDANCE WITH THE GUIDELINES BELOW: 2. SOIL MIXTURE SHALL CONSIST OF TWO PARTS OF TOPSOIL AND ONE PART SAND, AS DESCRIBED BELOW. CONTRACTOR TO SUBMIT SAMPLES AND PH TESTING RESULTS OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE. a. TOPSOIL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT OPENINGS SHALL BE FERTILE, FRIABLE, AND OF A LOAMY CHARACTER, REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER, FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER, HAVE A PH BETWEEN 5.5 AND 8.0, AND SOLUBLE SALTS LESS THAN 3.0 MMHOS/CM. SUBMIT SOIL SAMPLE AND PH TESTING RESULTS FOR APPROVAL. b. SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND. 3. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE - AT WHICH POINT THE CONTRACTOR SHALL CONTACT THE PROJECT LANDSCAPE ARCHITECT TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING. <p>F. WATER</p> <ol style="list-style-type: none"> 1. WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC.... IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER. <p>* WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.</p> <p>G. FERTILIZER</p> <ol style="list-style-type: none"> 1. CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE 	MATERIAL	SAMPLE SIZE	MULCH	ONE (1) CUBIC FOOT	TOPSOIL MIX	ONE (1) CUBIC FOOT	PLANTS	ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY)	<p>NATURALLY-DERIVED.</p> <p>* FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.</p> <p>H. MULCH</p> <ol style="list-style-type: none"> 1. MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A DEPTH OF THREE (3) INCHES CLEAR MULCH FROM EACH PLANT'S CROWN (BASE) OR AS SHOWN IN PLANTING DETAILS. MULCH SHALL BE DOUBLE SHREDDED HARDWOOD MULCH. DYED MULCH IS NOT ACCEPTABLE. SUBMIT SAMPLES TO PROJECT LANDSCAPE ARCHITECT FOR APPROVAL. MULCH SHALL BE PROVIDED OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUND COVER, VINE BED, AND TREE RING (6" MINIMUM) PLANTED UNDER THIS CONTRACT, AS WELL AS FOR ANY EXISTING LANDSCAPE AREAS AS SHOWN ON PLANS. <p>I. DIGGING AND HANDLING</p> <ol style="list-style-type: none"> 1. ALL TREES SPECIFIED SHALL BE BALLED AND BURLAPPED (B&B) UNLESS OTHERWISE APPROVED BY PROJECT LANDSCAPE ARCHITECT. 2. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO THE SITE SHALL BE SPRAYED WITH AN ANTI-TRANSPIRANT PRODUCT ("WILTFRUP" OR EQUAL) TO MINIMIZE TRANSPIRATIONAL WATER LOSS. 3. B&B AND FIELD GROWN (FG) PLANTS SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS SHALL NOT BE HANDLED BY STEMS. <p>J. CONTAINER GROWN STOCK</p> <ol style="list-style-type: none"> 1. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION. 2. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG ENOUGH FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS. 3. ROOT BOUND PLANTS ARE NOT ACCEPTABLE AND WILL BE REJECTED. <p>K. MATERIALS LIST</p> <ol style="list-style-type: none"> 1. QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE PLANS SHALL GOVERN. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE. <p>L. FINE GRADING</p> <ol style="list-style-type: none"> 1. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN DISTURBED DURING CONSTRUCTION. 2. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH. 3. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES, IF APPLICABLE. <p>M. PLANTING PROCEDURES</p> <ol style="list-style-type: none"> 1. THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER DAILY. ALL MORTAR, CEMENT, BUILDING MATERIALS, AND TOXIC MATERIAL SHALL BE COMPLETELY REMOVED FROM PLANTING AREAS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS IN PLANTING AREAS WHICH WILL ADVERSELY AFFECT THE PLANTING WORK, THE CONTRACTOR SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR. 2. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL COLORADO (811) TO LOCATE UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. 3. CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL PLANTING AREAS TO A MINIMUM DEPTH OF 36" OR TO NATIVE SOIL. CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISHED GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36" DEEP EXCAVATION BY THE CONTRACTOR, AND POSITIVE DRAINAGE CAN NOT BE ACHIEVED, CONTRACTOR SHALL UTILIZE POOR DRAINAGE CONDITION PLANTING DETAIL. 4. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS SPECIFIED HEREIN. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE. 5. COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. UPON ARRIVAL AT THE SITE, PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ONSITE SHALL NOT REMAIN UNPLANTED OR APPROPRIATELY HEATED IN FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES WORKMANLIKE METHODS CUSTOMARY IN ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE SHALL BE EXERCISED. 6. WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS. 7. ALL PLANTING OPENINGS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH ANSI Z60.1-2014 AMERICAN STANDARD FOR NURSERY STOCK. 8. TEST ALL TREE OPENINGS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE. IF POOR DRAINAGE EXISTS, UTILIZE "POOR DRAINAGE CONDITION" PLANTING DETAIL. 9. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW, FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMAN. 10. PRIOR TO EXCAVATION OF TREE OPENINGS, AN AREA EQUAL TO TWO TIMES THE DIAMETER OF THE ROOT BALL SHALL BE ROTO-TILLED TO A DEPTH EQUAL TO THE DEPTH OF THE ROOT BALL. 11. EXCAVATION OF TREE OPENINGS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB-BASES. 12. IN CONTINUOUS SHRUB AND GROUND COVER BEDS, THE ROTO-TILLED PERIMETER SHOULD EXTEND TO A DISTANCE OF ONE FOOT BEYOND THE DIAMETER OF A SINGLE ROOT BALL. THE BED SHALL BE TILLED TO A DEPTH EQUAL TO THE ROOT BALL DEPTH PLUS 6". 13. TREE OPENINGS FOR WELL DRAINED SOILS SHALL BE DUG SO THAT THE BOTTOM OF THE ROOT BALL WILL REST ON UNDISTURBED SOIL AND THE TOP OF THE ROOT BALL WILL BE FLUSH WITH FINISH GRADE. IN POORLY DRAINED SOILS THE TREE OPENING SHALL BE DUG SO THAT THE ROOT BALL RESTS ON UNDISTURBED SOIL AND THE TOP OF THE ROOT BALL IS 1" ABOVE FINISH GRADE. PLANT PIT WALLS SHALL BE SCARIFIED PRIOR TO PLANT INSTALLATION. 14. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES. 15. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION 'E'. 16. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. SOIL MIXTURE SHALL BE BACK FILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING). 17. AMEND PINE AND OAK PLANT OPENINGS WITH ECTOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S 	<p>RECOMMENDATION. ALL OTHER PLANT OPENINGS SHALL BE AMENDED WITH ECTOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. PROVIDE PRODUCT INFORMATION SUBMITTAL PRIOR TO INOCULATION.</p> <ol style="list-style-type: none"> 18. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN ALL SOIL IS SATURATED. TO DO THIS, FILL HOLE WITH WATER AND ALLOW TO SOAK MINIMUM TWENTY (20) MINUTES, STIRRING IF NECESSARY TO GET SOIL THOROUGHLY WET. PACK LIGHTLY WITH FEET. ADD MORE WET SOIL MIXTURE. DO NOT COVER TOP OF BALL WITH SOIL MIXTURE. 19. ALL BURLAP, ROPE, WIRES, BASKETS, ETC... SHALL BE REMOVED FROM THE SIDES AND TOPS OF BALLS, BUT NO BURLAP SHALL BE PULLED FROM UNDERNEATH. 20. TREES SHALL BE PRUNED, IN ACCORDANCE WITH ANSI A-300, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL SOFT WOOD OR SUCKER GROWTH AND ALL BROKEN OR BADLY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT. ALL PRUNING TO BE PERFORMED BY CERTIFIED ARBORIST. 21. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. MATERIALS INSTALLED SHALL MEET MINIMUM SPECIMEN REQUIREMENTS OR QUANTITIES SHOWN ON PLANS, WHICHEVER IS GREATER. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 6". REMOVE AND DISPOSE ALL DEBRIS. MIX TOP 4" THE PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION 'E'. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION. 22. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAIVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE PROJECT LANDSCAPE ARCHITECT IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE PROJECT LANDSCAPE ARCHITECT IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY. 23. ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S RECOMMENDATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER, (AS ALLOWED BY JURISDICTIONAL AUTHORITY) <p>N. LAWN SODDING</p> <ol style="list-style-type: none"> 1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER. 2. ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS BY MEANS OF A SOD CUTTER TO A DEPTH OF THREE (3) INCHES, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE. 3. PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY. 4. SODDING <ol style="list-style-type: none"> a. THE CONTRACTOR SHALL SOD ALL AREAS THAT ARE NOT PAVED OR PLANTED AS DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE. b. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. ADJACENT TO BUILDINGS, A 24 INCH STONE MULCH STRIP SHALL BE PROVIDED. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY. 5. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE. 6. LAWN MAINTENANCE <ol style="list-style-type: none"> a. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS (LARGER THAN 12"x12") UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK, INCLUDING REGRADING, IF NECESSARY. b. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD LAWN UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY. 0. EDGING <ol style="list-style-type: none"> a. CONTRACTOR SHALL INSTALL 4"x6" ROLLED TOP STEEL EDGING BETWEEN ALL SOD/SEED AREAS AND PLANTING BEDS. P. CLEANUP <ol style="list-style-type: none"> 1. UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM CONTRACTOR'S WORK. ALL PAVED AREAS SHALL BE CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S REPRESENTATIVE. Q. PLANT MATERIAL MAINTENANCE <ol style="list-style-type: none"> 1. ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, PRUNING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. R. FINAL INSPECTION AND ACCEPTANCE OF WORK <ol style="list-style-type: none"> 1. FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE LANDSCAPE ARCHITECT OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED. S. WARRANTY <ol style="list-style-type: none"> 1. THE LIFE AND SATISFACTORY CONDITION OF ALL PLANT MATERIAL INSTALLED (INCLUDING SOD) BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. 2. ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION AT THE END OF THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED PLANTED AND MULCHED AS SPECIFIED AT NO ADDITIONAL COST TO THE OWNER. 3. IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE AND IRRIGATION MAINTENANCE, THE CONTRACTOR SHOULD VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE (1) YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER. CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH. T. PARKING LOT ISLAND NOTE <ol style="list-style-type: none"> 1. THE SOIL OF ANY PLANTER WITHIN THE PARKING LOT SHALL BE STRUCTURALLY RENOVATED (TILLED) OR REMOVED TO A DEPTH OF THIRTY INCHES (30") AND REPLACED WITH AN ACCEPTABLE GROWING MEDIUM FOR THE SPECIES INDICATED FOR INSTALLATION. U. MAINTENANCE <ol style="list-style-type: none"> 1. LANDSCAPE IMPROVEMENTS AND MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE OWNER, AND/ OR THEIR ASSIGNS. 2. ALL STREET TREES AND STREETScape IMPROVEMENTS LOCATED IN THE R.O.W. WILL BE MAINTAINED BY THE ABUTTING PROPERTY OWNER.
MATERIAL	SAMPLE SIZE									
MULCH	ONE (1) CUBIC FOOT									
TOPSOIL MIX	ONE (1) CUBIC FOOT									
PLANTS	ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY)									

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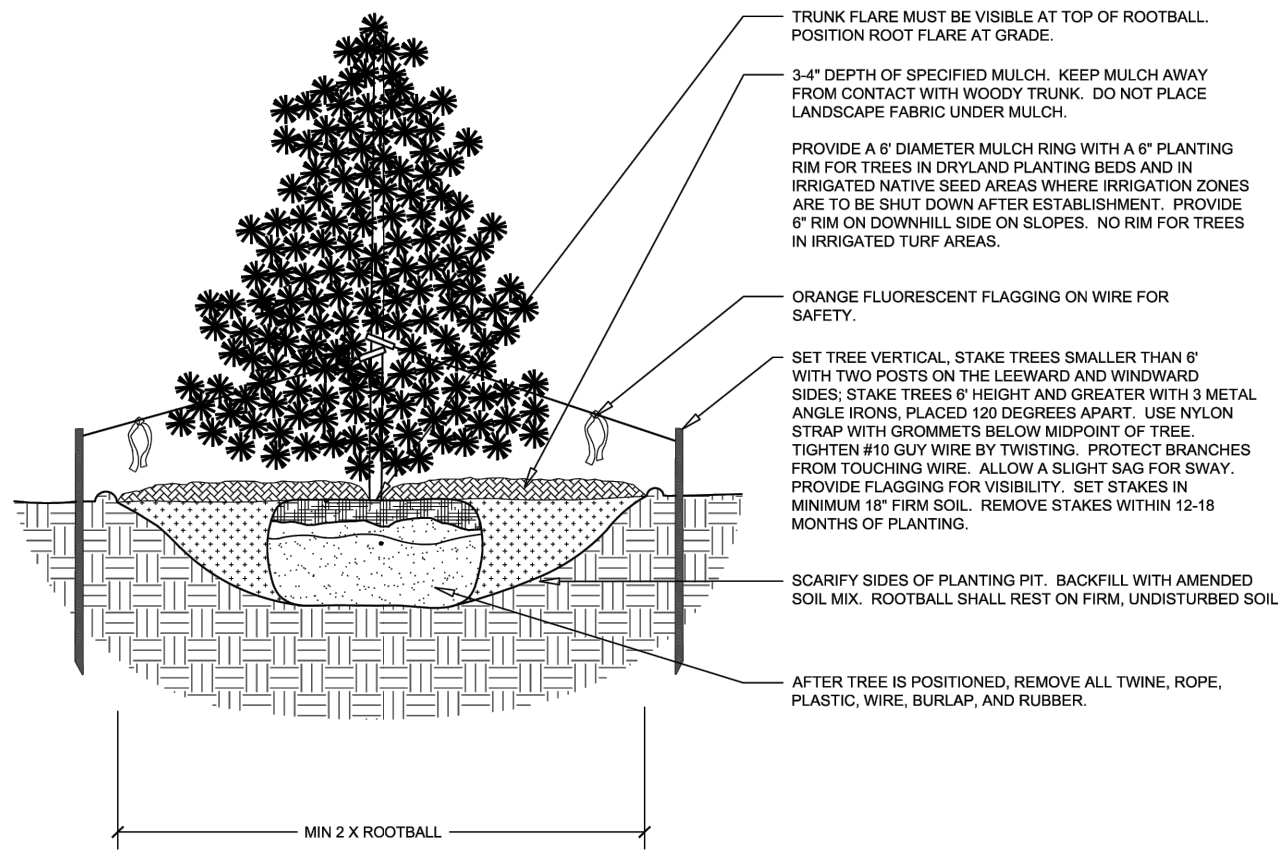
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- NOTES:**
1. MARK THE NORTH SIDE OF TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE.
 2. AT TIME OF PLANTING, DO NOT REMOVE OR CUT LEADER AND PRUNE ONLY DEAD OR BROKEN BRANCHES. CROSS OVER BRANCHES, AND WEAK OR NARROW CROTCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED. HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
 3. STRUCTURAL PRUNING SHOULD NOT BEGIN UNTIL AFTER ESTABLISHMENT PERIOD, USUALLY TWO GROWING SEASONS.
 4. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
 5. DO NOT FERTILIZE FOR AT LEAST ONE GROWING SEASON.
 6. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
 7. IN WINTER WRAP TRUNK ON EXPOSED SITES AND SPECIES WITH THIN BARK WITH ELECTRICAL OR DUCT TAPE, NOT TWINE.
 8. COORDINATE WITH CITY FORESTRY FOR CURRENT INSECT AND DISEASE RECOMMENDATIONS PRIOR TO PLANTING.
 9. DEEP WATER ALL PLANTS AT TIME OF PLANTING.
 10. ALL TREES LOCATED IN ROCK/COBBLE BEDS SHALL HAVE A 36 INCH DIAMETER WOOD MULCH RING.

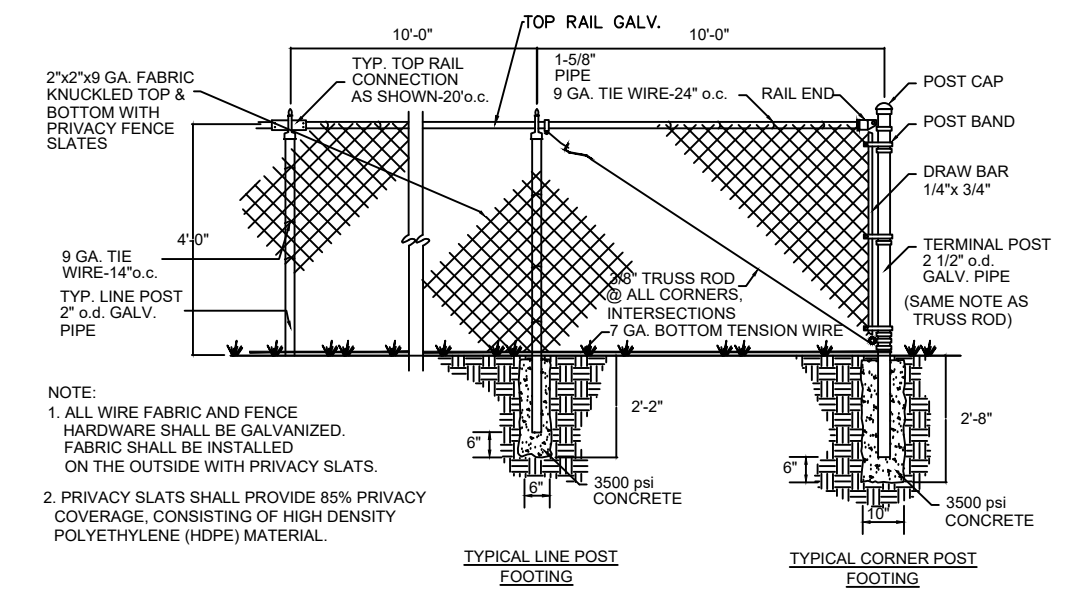


1 DECIDUOUS TREE PLANTING
NTS 196-003-020-10

- NOTES:**
1. DO NOT REMOVE OR CUT LEADER
 2. PRUNE ONLY DEAD OR BROKEN BRANCHES IMMEDIATELY PRIOR TO PLANTING.
 3. DO NOT REMOVE ANY DOUBLE LEADER, UNLESS OTHERWISE DIRECTED BY OWNERS REPRESENTATIVE.
 4. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
 5. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
 6. MARK THE NORTH SIDE OF TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE, WHENEVER POSSIBLE.
 7. PINE AND SPRUCE TREES TO BE SPRAYED FOR IPS BARK BEETLE PRIOR TO PLANTING. COORDINATE WITH CITY FORESTRY FOR CURRENT INSECT AND DISEASE RECOMMENDATIONS PRIOR TO PLANTING.
 8. ALL TREES TO BE DEEP WATERED AT TIME OF PLANTING.
 9. ALL TREES LOCATED IN ROCK/COBBLE BEDS SHALL HAVE A 36 INCH DIAMETER WOOD MULCH RING.



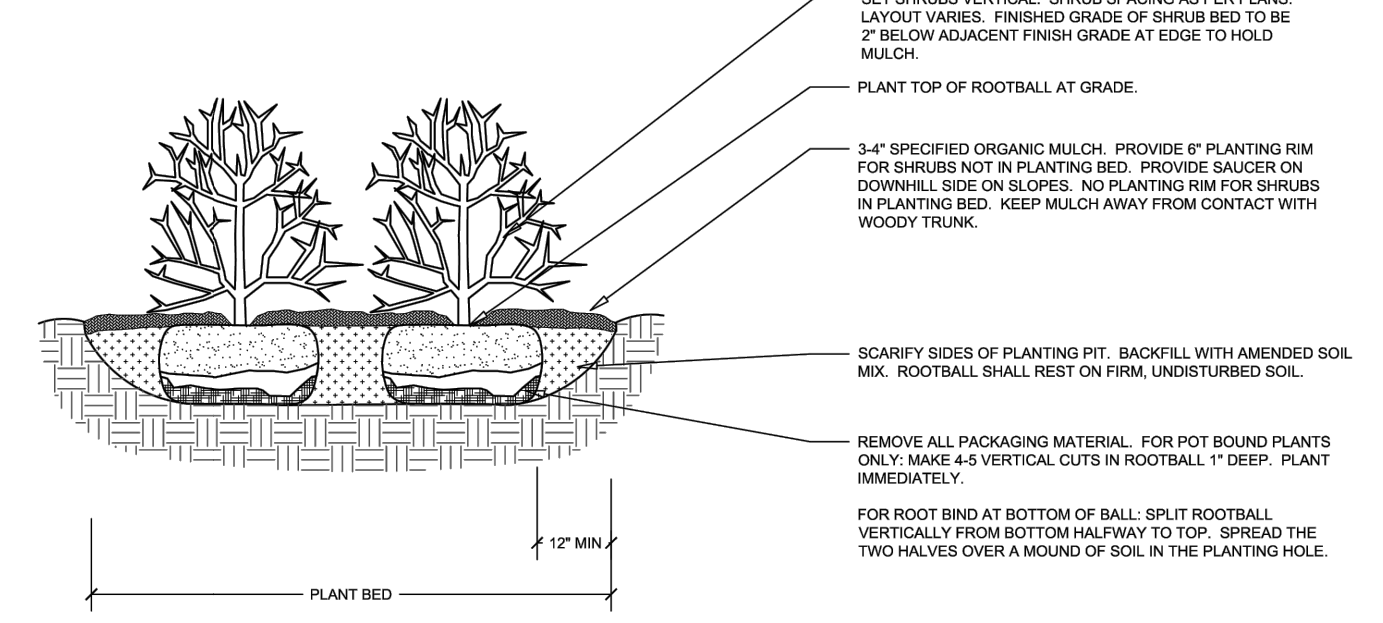
2 EVERGREEN TREE PLANTING
NTS 196-003-020-12



3 CHAIN LINK FENCE
NTS

Fence surrounding storage area shall be at least 6' tall and 100% opaque.
Chain link with privacy slats does not meet the intent of the code.

- NOTES:**
1. PRUNE ONLY DEAD OR BROKEN BRANCHES AND WEAK OR NARROW CROTCHES.
 2. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
 3. DO NOT FERTILIZE FOR AT LEAST ONE GROWING SEASON.
 4. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
 5. ALL SHRUBS IN ROCK AREAS TO RECEIVE SHREDDED MULCH RINGS.
 6. DEEP WATER ALL PLANTS AT TIME OF PLANTING.
 7. ALL SHRUBS LOCATED IN ROCK/COBBLE BEDS SHALL HAVE A 18 INCH DIAMETER WOOD MULCH RING.



4 SHRUB PLANTING
NTS 196-003-020-11

NATIVE SEED INSTALLATION AND MAINTENANCE

- A. NATIVE SEED ESTABLISHMENT**
1. **ALL AREAS WITH NATIVE LAWN MIX (SEED)** SHALL RECEIVE 3 CUBIC YARD OF ORGANIC MATTER PER 1000 SQ. FT. PRIOR TO SEEDING. THE CONTRACTOR SHALL PROVIDE A DELIVERY RECEIPT AND/OR PROOF OF ORGANIC MATTER DELIVERY TO THE LANDSCAPE ARCHITECT FOR THE PROJECT RECORDS.
 2. **ALL NATIVE SEED AREAS** SHALL HAVE SOIL TILLED TO A DEPTH OF 8-INCHES, PRIOR TO AND WITHIN TWO-WEEKS OF SEEDING. THIS SHALL BE CONDUCTED TO ELIMINATE COMPACTED SOILS AND REMOVE EXISTING VEGETATION.
 3. CONTRACTOR SHALL INSTALL NATIVE SEED MIXES VIA DRILL SEEDING AT THE RATES DESCRIBED IN THE PLANT SCHEDULE. HYDROSEEDING AND BROADCAST SEEDING ARE NOT PERMITTED.
 4. NATIVE SEED MIXES SHALL BE INSTALLED ONCE NIGHTTIME TEMPERATURES CONSISTENTLY EXCEED 60 DEGREES. (ESTIMATED MID-JUNE)
 5. CHEMICAL METHODS OF WEED CONTROL ARE PROHIBITED DURING THE FIRST GROWING SEASON. CARE SHOULD BE TAKEN TO ELIMINATE WEEDS DURING TILLING PRIOR TO INSTALLATION. SELECTIVE MANUAL OR MECHANICAL WEED CONTROL/REMOVAL SHALL BE PROVIDED DURING THE FIRST YEAR ESTABLISHMENT PERIOD.
- B. NATIVE LAWN MIX MAINTENANCE**
1. ONCE ESTABLISHED, **ALL AREAS WITH NATIVE LAWN MIX** SHALL BE MOWED ONCE PRIOR TO SPRING GREENING UP (FEBRUARY TO MARCH). A SECOND MOWING SHALL BE SCHEDULED AFTER INITIAL SPRING GROWTH AND GREENING UP (LATE JUNE TO EARLY JULY). NATIVE LAWN MIX SHALL NOT RECEIVE REGULAR MOWING THROUGHOUT THE REMAINDER OF THE GROWING SEASON. MOW DECK HEIGHT SHALL BE SET TO 4\"/>
 2. AFTER ESTABLISHMENT, **ALL AREAS WITH NATIVE LAWN MIX** SHALL MAINTAIN A REGULAR WATERING SCHEDULE THROUGHOUT AT LEAST THE SECOND GROWING SEASON. PROVIDE APPROXIMATELY 3/4\"/>
 3. APPLY 1/2 LB. OF NITROGEN PER 1000 SQ. FT. ANNUALLY IN MID-JUNE.

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