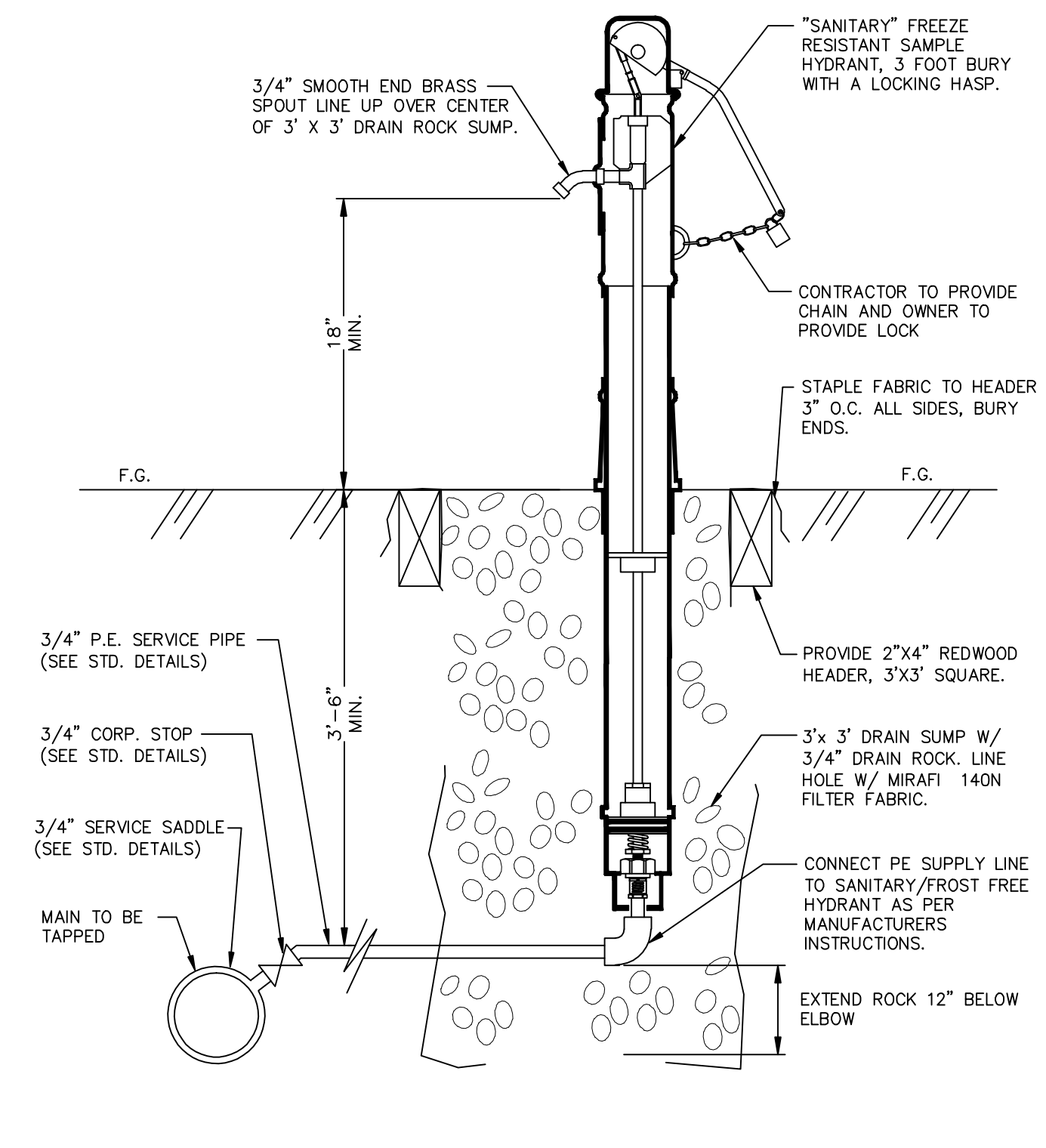


NOTES:

- SIZE AND PRESSURE CLASS AS INDICATED ON THE PLANS, SHALL BE DETERMINED BY THE DESIGN ENGINEER. MINIMUM SIZE 3/4" INCH. CORP BALL VALVE SHALL BE MUELLER B-20013 OR B-2989, OR FORD FB-500-x WITH MALE I.P. THREADS BOTH ENDS OR APPROVED EQUAL. ELBOW COUPLING SHALL BE MUELLER H-15633 FEMALE I.P. THREAD X CTS 110 COMP. OR FORD L14-xx-Q FEMALE IP THREAD X QUICK JOINT, W/ TUBING LINER OR APPROVED EQUAL.
- AIR RELEASE VALVES SHALL BE INSTALLED OUTSIDE PAVEMENT SECTION. SLOPE GROUND AWAY FROM AIR RELEASE VALVE BOX OR CONSTRUCT MINIMUM HEIGHT CURBING TO PROTECT FROM FLOODING BY SURFACE WATERS.
- ALL PIPES SHALL HAVE POSITIVE SLOPE FROM MAIN LINE TO AIR RELEASE VALVE.
- 1 1/2" INCH TO 2" AIR-RELEASE VALVES REQUIRE A CHRISTY FL36 BOX AND COVER OR APPROVED EQUAL.
- STEEL PIPE PAINT SHALL BE RUST-OLEUM 7400 HIGH GLOSS SAFETY YELLOW ALKYD ENAMEL OR APPROVED EQUAL.

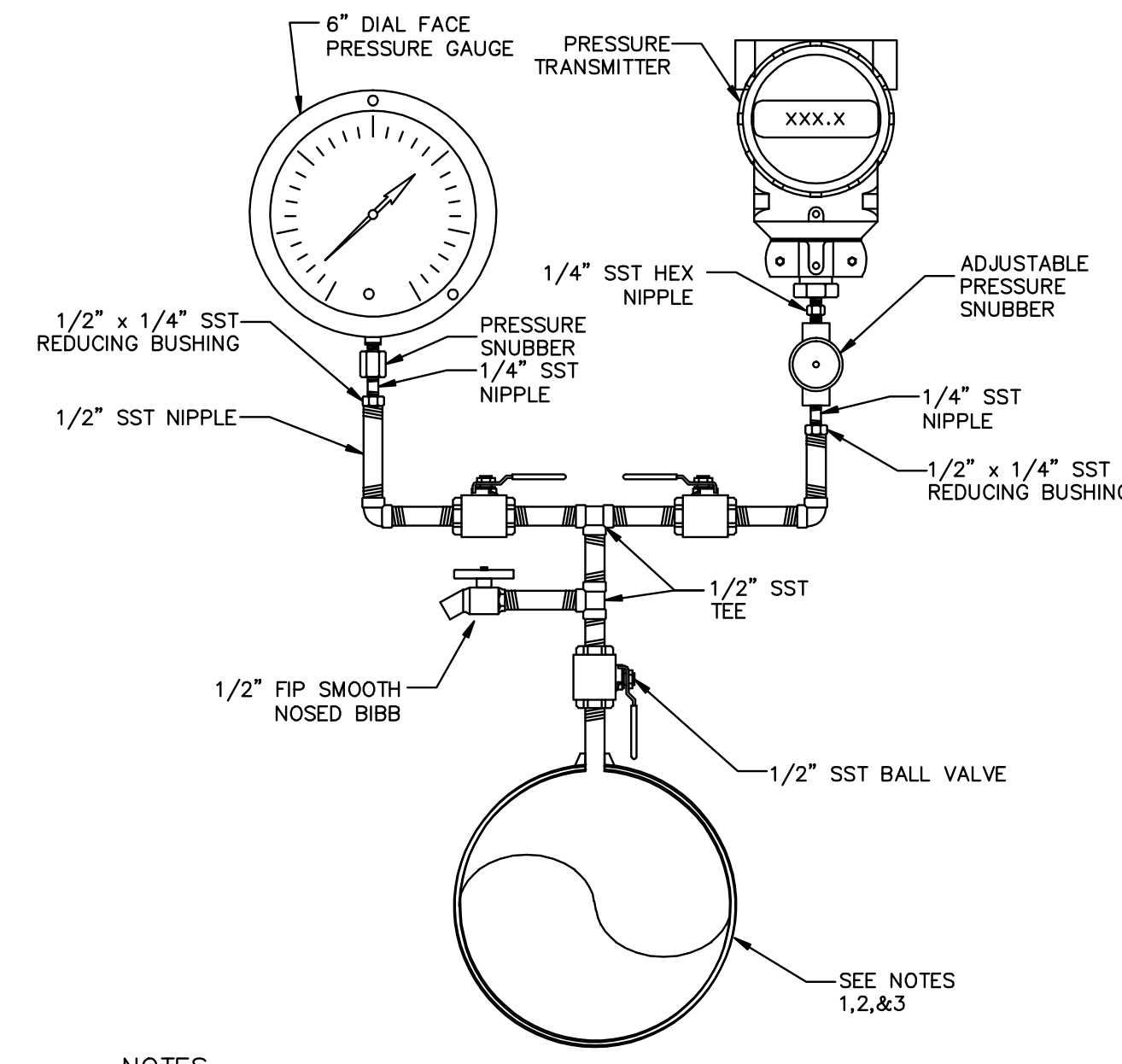
POTABLE AIR RELEASE
NOT TO SCALE



NOTES:

- HYDRANT SHALL BE A MURCKO MODEL M-NPL75 OR APPROVED EQUIVALENT, 3' BURY, WITH A BELOW-GRADE INTERNAL RESERVOIR, A LOCKING HASP AND SMOOTH, PLAIN END SPOUT.
- UNIT SHALL EXTEND BELOW GRADE LEVEL SO THAT SUPPLY INLET, VALVE AND RESERVOIR ARE POSITIONED BELOW FROST LINE.
- DURING SHUTOFF, A PISTON SHALL DRAW WATER FROM THE SUPPLY COLUMN INTO THE RESERVOIR, AND AT NEXT USAGE, THE PISTON SHALL EXPUL THE WATER IN THE RESERVOIR THRU THE NOZZLE BEFORE FRESH WATER FLOWS. THE WATER SUPPLY SHALL BE PROTECTED AGAINST ANY SURFACE OR UNDERGROUND CONTAMINATION.
- HYDRANT SHALL NOT OPERATE USING VENTURI ACTION TO CLEAR WATER TRAPPED IN SUPPLY COLUMN AT SHUT-OFF.

SAMPLING HYDRANT
NOT TO SCALE



NOTES:

- FOR STL, GALVS & PVC 2 1/2" & SMALLER USE A BUSHING IN A TEE.
- FOR DI & FRP, ALL SIZES, USE PIPE SADDLE W/BUSHING.
- FOR STL & SST PIPES 3" & LARGER & PRESSURE VESSELS, USE THREAD-O-LET AS SHOWN.
- SST = TYPE 304 SST.

PRESSURE GAUGE & TRANSMITTER
NOT TO SCALE

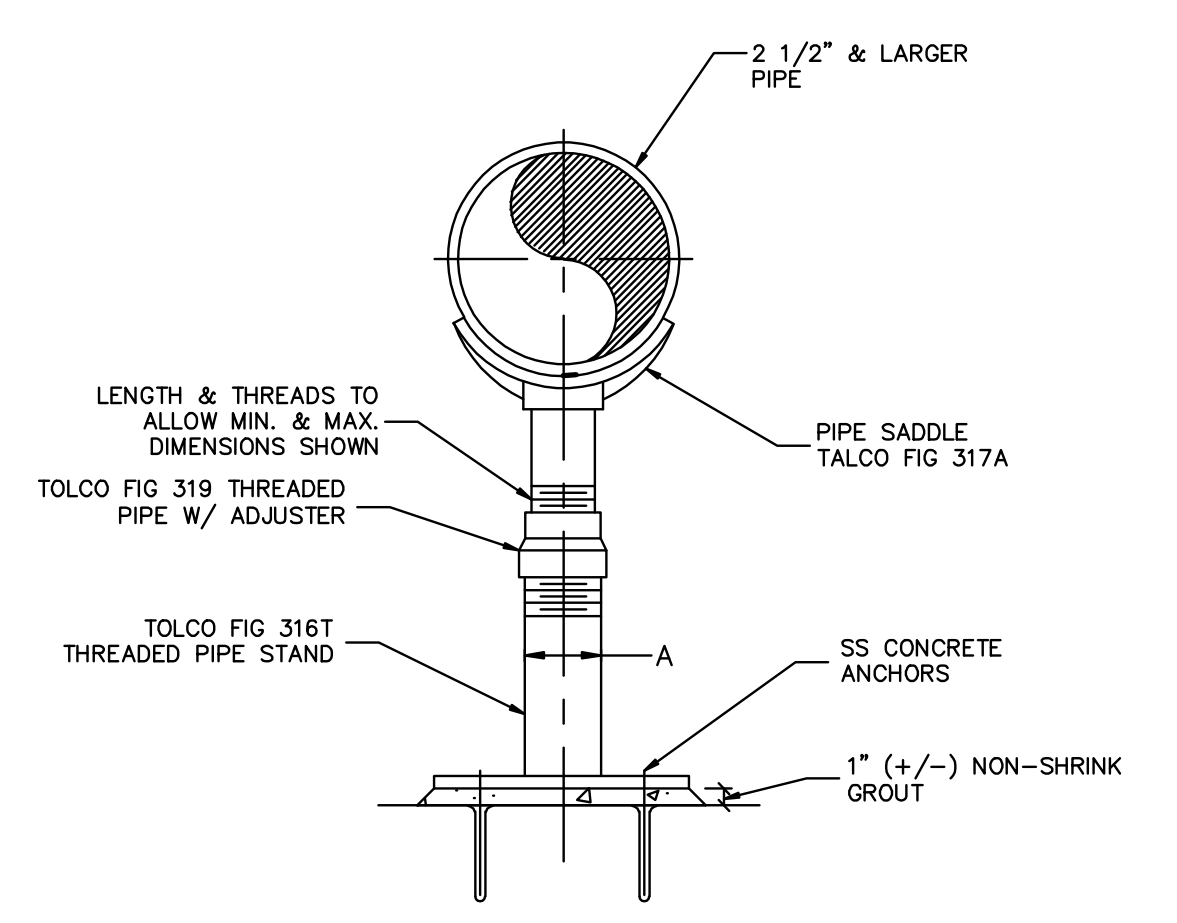
MINIMUM LENGTH (FT) TO BE RESTRAINED ON EACH SIDE OF FITTING(S).

	PIPE SIZE				
	8"	10"	12"	14"	16"
90° BEND	25	29	34	39	43
45° BEND	11	12	14	16	18
22-1/2° BEND	5	6	7	8	9
11-1/4° BEND	3	3	4	4	5
BRANCH OF TEE	1	1	1	1	7
PLUG	102	122	143	163	184

NOTES:

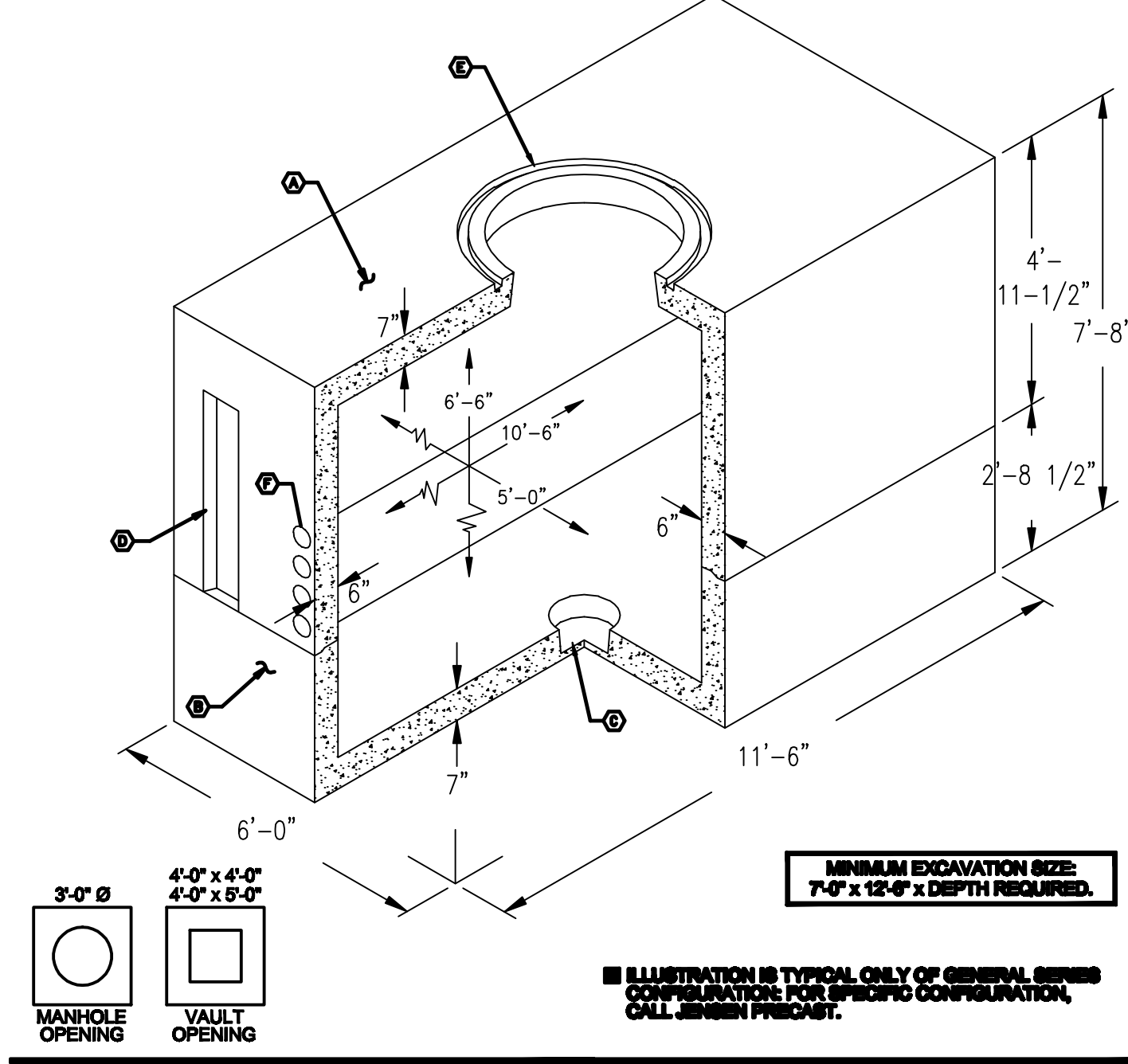
- FITTINGS SHALL BE RESTRAINED JOINTS UNLESS OTHERWISE INDICATED.
- INSTALL FULL LENGTH JOINTS WITH TOTAL LENGTH EQUAL TO OR GREATER THAN SHOWN IN THE TABLE.
- WHERE TWO OR MORE FITTINGS ARE TOGETHER, USE FITTING WHICH YIELDS GREATEST LENGTH OF RESTRAINED PIPE.
- IN LINE VALVES AND THROUGH RUN OF TEES OUTSIDE LIMITS OF RESTRAINED JOINTS FROM OTHER FITTINGS NEED NOT BE RESTRAINED UNLESS OTHERWISE INDICATED.
- LENGTHS SHOWN IN THE TABLE HAVE BEEN CALCULATED IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" AS PUBLISHED BY EBAA IRON, INC. VER. 6.2, WITH THE FOLLOWING ASSUMPTIONS:
 PIPE MATERIAL: POLY WRAPPED DUCTILE
 TEST PRESSURE: 150 P.S.I.
 SOIL TYPE: CL. GRANULAR FILL
 TRENCH TYPE: TYPE 5
 SAFETY FACTOR: 1.5 TO 1
 DEPTH OF BURY: 3.5
- LENGTHS SHOWN FOR TEES HAVE A LENGTH ALONG THE RUN OF 18 FEET AND BOTH RUN AND BRANCH OF THE SAME SIZE.

DUCTILE IRON PIPE RESTRAINT JOINT TABLE
NOT TO SCALE



PIPE SIZE	A	MAX HEIGHT	CONCRETE ANCHOR	EMBED
2-1/2"	2"	6'-0"	1/2"	5"
3"	2"	6'-0"	1/2"	5"
4"	3"	6'-0"	1/2"	5"
6"	3"	6'-0"	1/2"	5"
8"	3"	6'-0"	1/2"	5"
10"	3"	6'-0"	1/2"	5"
12"	3"	6'-0"	1/2"	5"
14"	4"	6'-0"	5/8"	5"
16"	4"	6'-0"	5/8"	5"
18"	6"	6'-0"	3/4"	5"

PIPE SUPPORT
NOT TO SCALE



- TOP SECTION WT. 16,280 Lbs.
- BOTTOM SECTION WT. 11,000 Lbs.
- SUMP - VARIOUS SIZES AVAILABLE
- KNOCKOUT - VARIOUS SIZES AVAILABLE
- FOR COVERS: SEE COVER AND NECKING SECTION.
- TERMINATORS - VARIOUS SIZES AVAILABLE

DESIGN FOR H-20-44 BRIDGE LOADING.

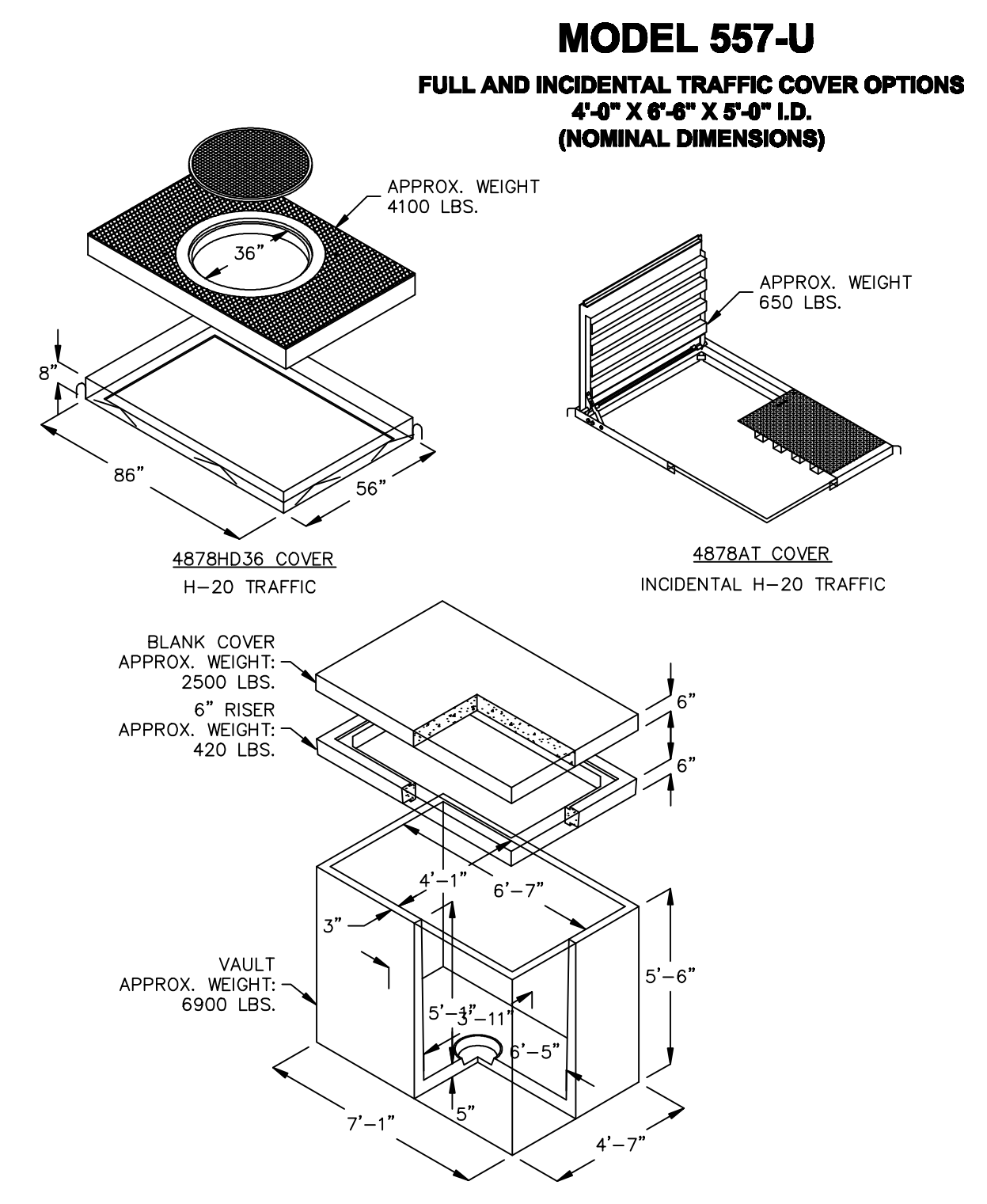
ASSEMBLY TO BE PLACED ON A F BASE OF CRUMBER RUN FOR EASE OF INSTALLATION AND EVEN LOAD DISTRIBUTION.

4'x16'x4' MANHOLE / VAULT

JENSEN PRECAST

5106 SERIES

REVISED 11-28-08

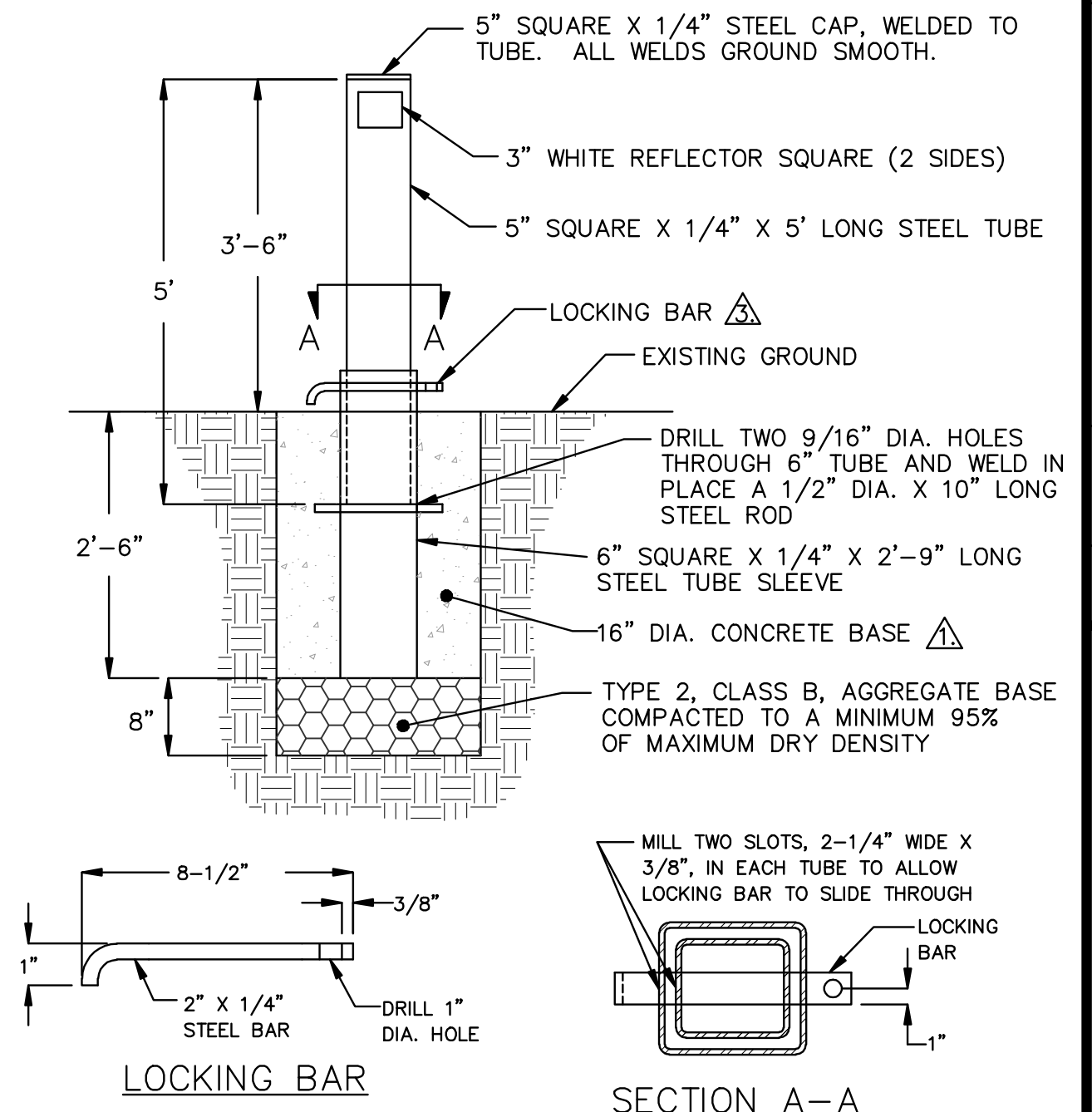


FOR COMPLETE DESIGN AND PRODUCT INFORMATION, CONTACT JENSEN PRECAST.



REV	DESCRIPTION	DATE	REV BY
A	CREATE DRAWING	04/14/07	MAJ

557 VAULT WITH 4878AT COVER
NOT TO SCALE



NOTES:

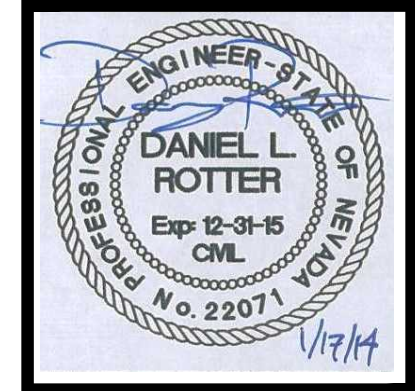
- PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 3000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, MINIMUM 6 BAGS OF CEMENT PER CUBIC YARD WITH SLUMP AT 1 TO 4 INCHES. ALL MATERIAL SHALL CONFORM TO SSPWC, SECTION 202.
- ALL WELDS AND BENDS SHALL BE SMOOTH, EVEN AND PAINTED.

CARSON CITY SHALL PROVIDE THE PADLOCK AND MAINTAIN THE KEYS.

REMOVABLE BOLLARD
NOT TO SCALE

RCB
 PROJ. MGR.:
 PROJ. ASSOC.:
 CHECKED BY:
 CCCCN15
 DWG NO.:
 SCALE (HORIZ):
 SCALE (VERT):
 JAN 2014

CARSON CITY DEPARTMENT
 PUBLIC WORKS DEPARTMENT
 3505 BUTTE WAY CARSON CITY, NEVADA 89701
 PH: 867-2355
 FAX: 867-2112



REV.	DATE	DESCRIPTION	BY	APP.

COSTCO INTERTIE & VISTA GRANDE WATERLINE
 PROJECT No: 04.1000
 PRV DETAILS 1

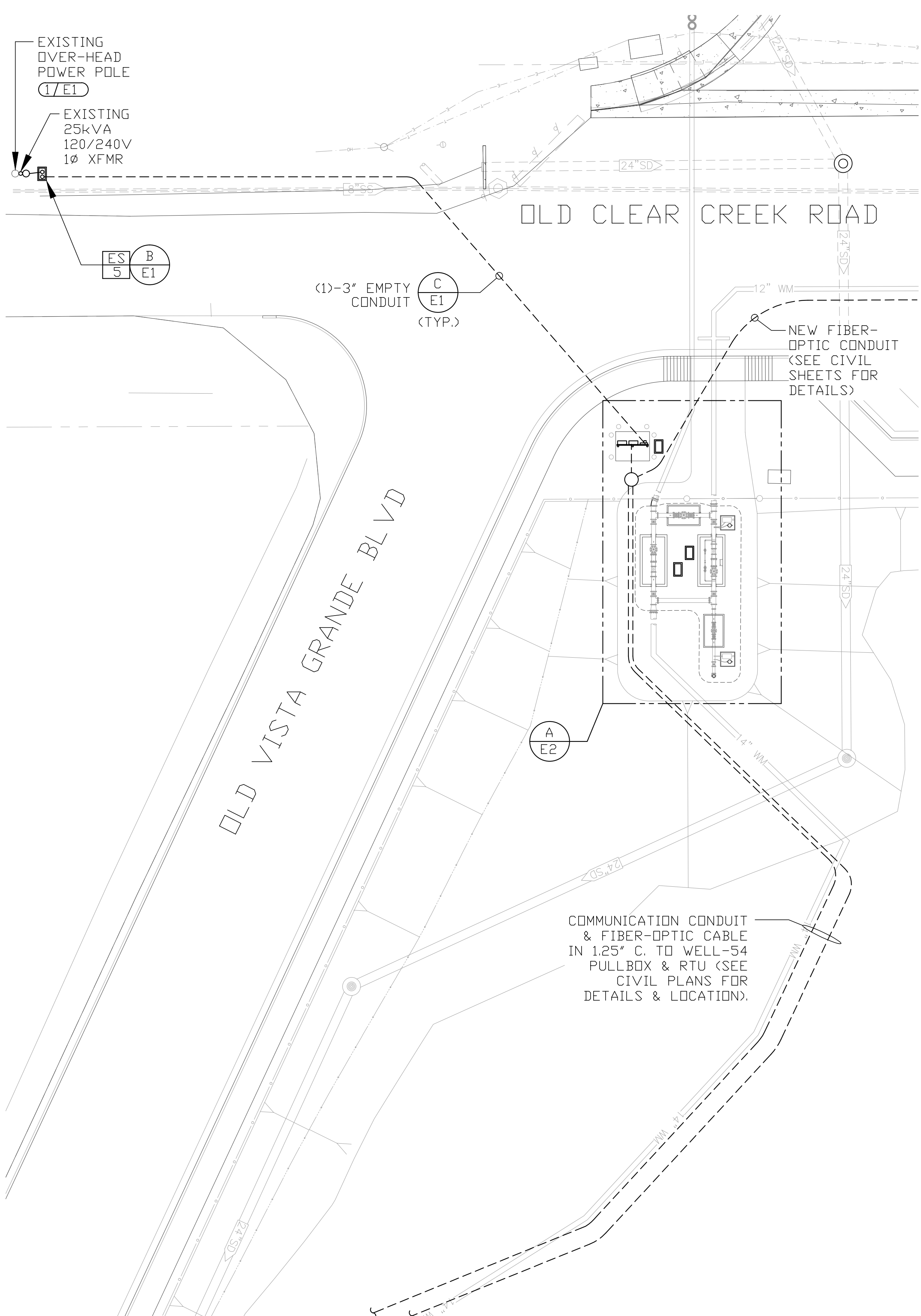
FOR BIDDING PURPOSES ONLY

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
(A/E1)	DETAIL IDENTIFICATION: TOP IS DETAIL/BOTTOM IS SHEET NUMBER
(17/E1)	NOTE IDENTIFICATION: NOTE NO. 1 ON SHEET E-1
(ES/1)	EQUIPMENT SCHEDULE IDENTIFICATION
⊕	DUPLEX GFCI RECEPTACLE
⊕	QUADRUPLEX GFCI RECEPTACLE
⊕	SPST SWITCH
⊕	GROUND
(M)	METER
(C)	CIRCUIT BREAKER
(FM)	FLOW METER SENSOR
(FS)	FLOAT SWITCH
(DS)	DOOR LIMIT SWITCH
(IA)	INTRUSION ALARM
(SV)	SOLENOID VALVE
(DA)	DOOR ALARM PANEL
—	CONDUIT UP
—	CONDUIT DOWN
—	CONDUIT STUB
—	PHASE CONDUCTOR; #12 THHN IN 3/4" C. U.O.N.
—	CODE SIZE GROUND BONDING CONDUCTOR PER N.E.C. TABLE 250-95
—	NEUTRAL CONDUCTOR; #12 THHN IN 3/4" C. U.O.N.
---	UNDERGROUND FEEDER, (2)-#12 THHN IN 3/4" C. U.O.N.
---	EXPOSED RUN, PARALLEL TO STRUCTURE IN UNFINISHED AREAS; (2)-#12 THHN IN 3/4" C. U.O.N.
LA-1,3,5	HOME RUN INDICATION. EX: 3-#12'S WITH 1-#12 NEUTRAL, AND 1-GROUND IN 3/4" C. TO PANELBOARD-LA, CIRCUITS 1,3,5
—8760—	BELDEN #8760 2/c #16 SHIELDED 600V CABLE IN 3/4" C.
///	SLASHES INDICATE NO. OF #14 MTW STRANDED CONTROL CONDUCTORS IN CONDUIT.
RTU	REMOTE TERMINAL UNIT
N.T.S.	NOT TO SCALE
C.	CONDUIT
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
PLC	PROGRAMMABLE LOGIC CONTROLLER
DAA	DR APPROVED ALTERNATE
GRS	GALVANIZED RIGID STEEL CONDUIT
F.M.	FLOW METER
E.C.	EMPTY CONDUIT

GENERAL REQUIREMENTS

- FURNISH ALL LABOR, MATERIAL, EQUIPMENT, TOOLS, ACCESSORIES, ETC. REQUIRED FOR A COMPLETE ELECTRICAL SYSTEM. ALL WORK SHALL CONFORM WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, NATIONAL BOARD OF FIRE UNDERWRITERS, APPLICABLE LOCAL CODES, AND POWER COMPANY STANDARDS. ALL MATERIAL SHALL BE NEW AND CONFORM WITH THE REQUIREMENT OF THE UNDERWRITER'S LABORATORIES, INC.
- POWER CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM. #8 AWG AND LARGER SHALL BE STRANDED. ALL CONDUCTORS TO BE TYPE "XHHW-2". ALL WIRING SHALL BE INSTALLED IN CONDUIT. CONTROL CONDUCTORS TO BE #16 XHHW-2 STRANDED. ALL EXPOSED CONDUIT SHALL BE RMC, GALVANIZED RIGID STEEL. ALL HORIZONTAL CONDUIT AT OR BELOW 18" TO BE PVC-TYPE SCHEDULE-40. ALL UNDERGROUND ELBOWS TO BE GALVANIZED RIGID STEEL (GRS). ALL METALLIC CONDUITS IN CONTACT WITH EARTH TO BE EITHER PCV-GRSC OR HALF-LAP WRAPPED IN SCOTCH-50 ELECTRICAL TAPE.
- SUBMIT SIX (6) COPIES OF SHOP DRAWINGS AND/OR MANUFACTURERS DESCRIPTIVE DATA ON ALL ELECTRICAL EQUIPMENT FOR APPROVAL WITHIN THIRTY (30) DAYS AFTER AWARD OF CONTRACT. THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PREPARED BY HIS SUPPLIERS AND SHALL MARK ALL COPIES AS ACCEPTABLE TO HIM. THE CONTRACTOR'S ACCEPTANCE SHALL INCLUDE CERTIFICATION THAT THE REQUIRED ELECTRICAL CONNECTIONS HAVE BEEN NOTED AND THAT EQUIPMENT CAN BE INSTALLED IN THE SPACE AVAILABLE.



(A/E1) SITE ELECTRICAL PLAN SCALE: 1/16"=1'-0"

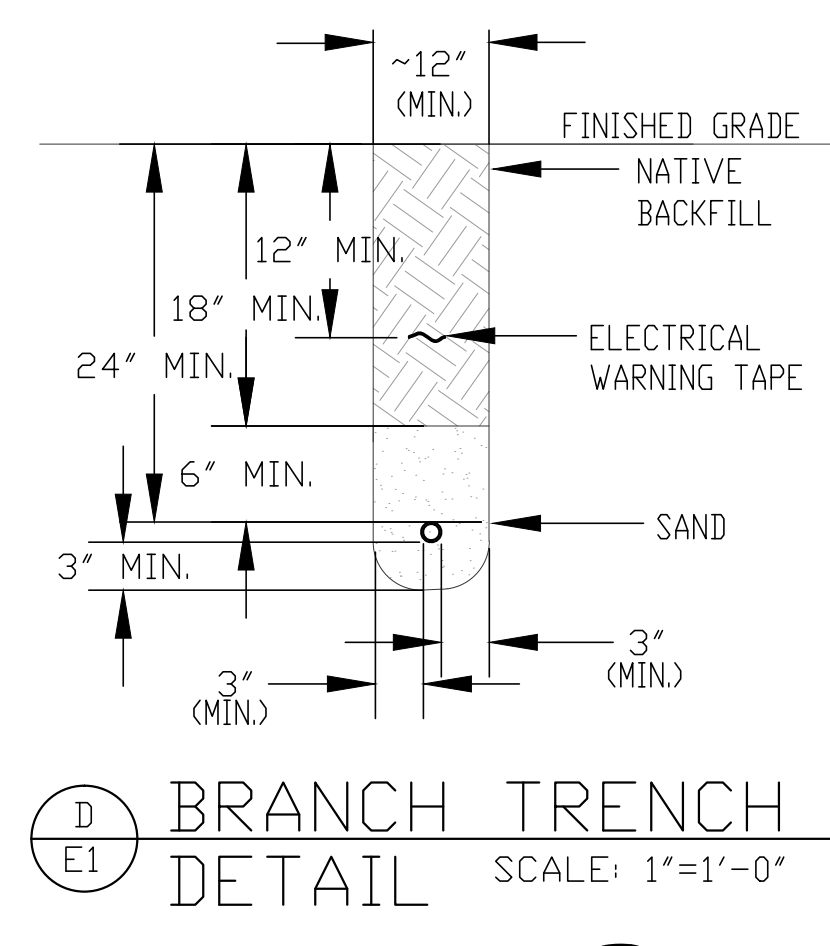
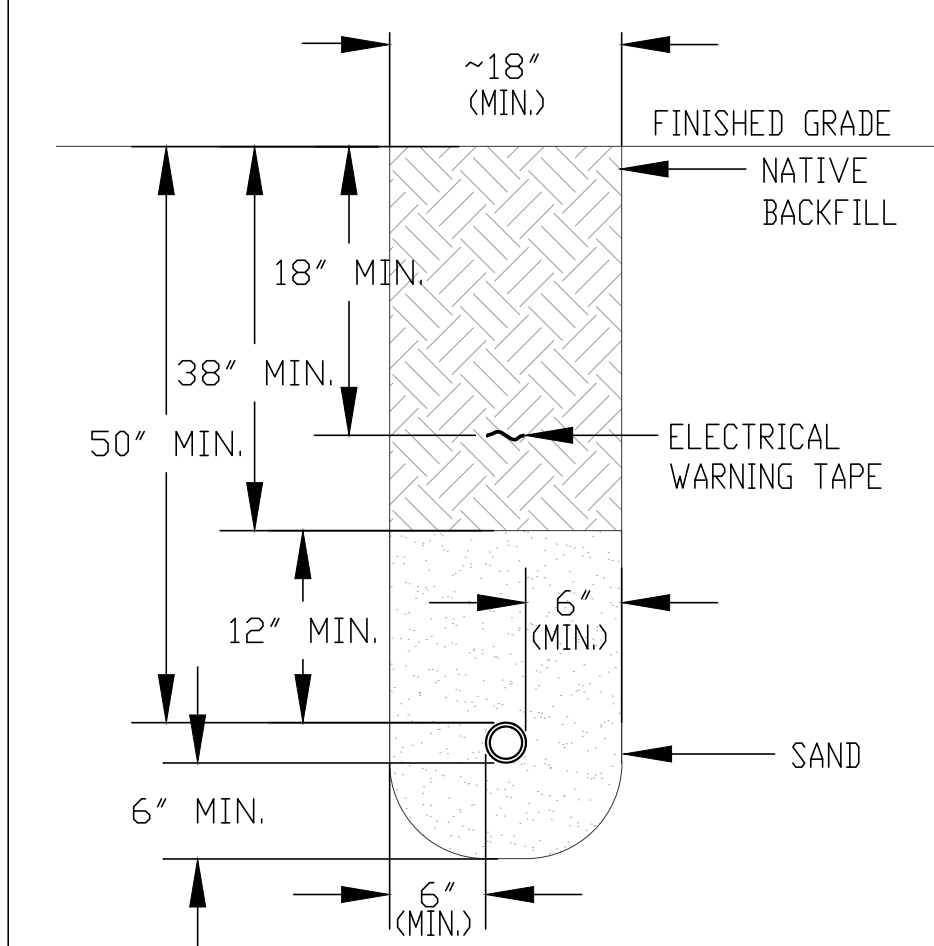
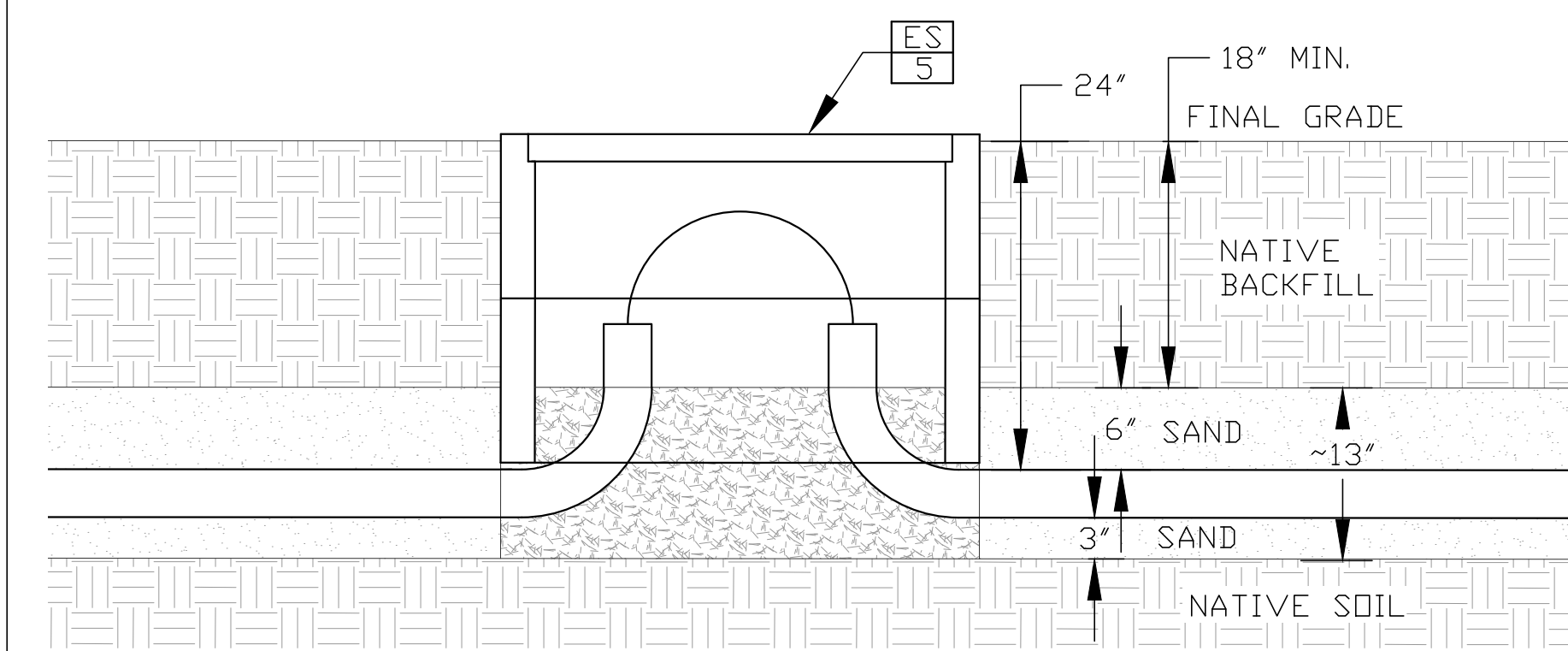
SHEET NOTES

- EXISTING NV ENERGY OVERHEAD POWER LINE TO FEED NEW PRV STATION. PROVIDE AND INSTALL POLE RISER, CONDUIT, TRENCHING, BACK FILL, ETC. VERIFY EXACT OVERHEAD POLE LOCATION & REQUIREMENTS WITH NV ENERGY WORK ORDER DRAWINGS AND CONSTRUCTION INSTRUCTIONS. PATCH ROAD CUT TRENCHES PER CIVIL SPECIFICATIONS. VERIFY EXACT TRANSFORMER REQUIREMENTS WITH NV ENERGY WORK ORDER DRAWINGS.

EQUIPMENT SCHEDULE

ITEM	QUANTITY	DESCRIPTION
1	1	100A 120/240V 1Ø 4-JAW NEMA-3R METER-MAIN WITH 100A/2P MAIN BREAKER & 12-CIRCUIT DISTRIBUTION PANEL CONFIGURED PER PANEL SCHEDULE. COOPER/B-LINE #U214MTBL. PROVIDE NEW TYPED PANEL DIRECTORY.
2	3	24VDC MAGNETIC FLOW METER TRANSMITTER & SENSOR WITH HART COMMUNICATION, LCD INDICATOR & KEYPAD, INTERNALLY POWERED 4-20mA SIGNAL, CLEAR PLASTIC PROTECTIVE COVER. FOXBORO TUBE PER CIVIL & SITE REQUIREMENTS WITH WALL-MOUNTED 'IMT25' TRANSMITTER & FLOW METER CABLE (LENGTH AS REQUIRED). INCLUDE TOTAL SUBMERGENCE OPTION.
3	4	NORMALLY-OPEN 120V POLY-PROPYLENE HERMETICALLY SEALED REDUNDANT HIGH-WATER ALARM FLOAT SWITCH. MJK #202810.
4	8	4-20mA PRESSURE TRANSDUCER. ASHCROFT #K17M0242C1 300#.
5	4	N-36 TYPE, 17"x30" CONCRETE PULLBOX, EXTENSION, AND LID. JENSEN PRECAST #N36 BDX, #N36D LOCK-LID, AND #N36X12 EXTENSION WITH PENTA-HEAD BOLTS.
6	4	24VDC MAGNETIC SWITCH INTRUSION ALARM WITH ALUMINUM BODY.
7	2	RTU & FLOW-METER CONTROL ENCLOSURE. HOFFMAN #A30H24CLP WITH #A30P24 BACKPANEL AND HOFFMAN #A-LFSWD DOOR SWITCH.
8	2	FIBERGLASS/POLYMER CONCRETE PULLBOX WITH SPLICE TRAY & PENTA-HEAD BOLTS. NEW BASIS #FCA400046T-00006 WITH COVER NAMEPLATE 'FIBER OPTIC.'

REMARKS: CONTRACTOR TO COORDINATE EQUIPMENT SCHEDULE QUANTITIES WITH ELECTRICAL DRAWINGS AND MODIFY AS REQUIRED.



(C/E1) SECONDARY TRENCH DETAIL SCALE: 1"=1'-0"

(D/E1) BRANCH TRENCH DETAIL SCALE: 1"=1'-0"

MINIMUM TRENCH REQUIREMENTS SHOWN. MODIFY TRENCH WIDTH AS NECESSARY FOR ADDITIONAL CONDUITS. PROVIDE AND INSTALL PULL-LINE IN ALL EMPTY CONDUITS FOR FUTURE CONDUCTOR PULLS. SEE CIVIL SHEETS FOR PAVEMENT PATCH REQUIREMENTS, MATERIALS, & PLACEMENT SPECIFICATIONS FOR BEDDING AND BACKFILL.

811
Know what's below. Call before you dig.

JENSEN ENGINEERING INC.
Electrical Engineers
9655 Gateway Drive Reno, Nevada 89521-2968
Ph. (775) 852-2288 Fax (775) 852-3388
email: jenseng@nrvbell.net web: www.jenseng.com

PROJ. MGR.: MJJ
PROJ. ASSOC.: MJJ
CHECKED BY: MJJ
DWG NO.: N39RP
SCALE (HORIZ):
SCALE (VERT):
PLOT DATE: 01-16-2014

CARSON CITY DEPARTMENT
PUBLIC WORKS
3606 BUTTE WAY CARSON CITY, NEVADA 89701
PH: 897-2955 FAX: 897-2112

Manhard Consulting Ltd.
3476 Executive Pointe Way, Suite 12 Carson City, NV 89706
PH: (775) 882-6530

1/21/14

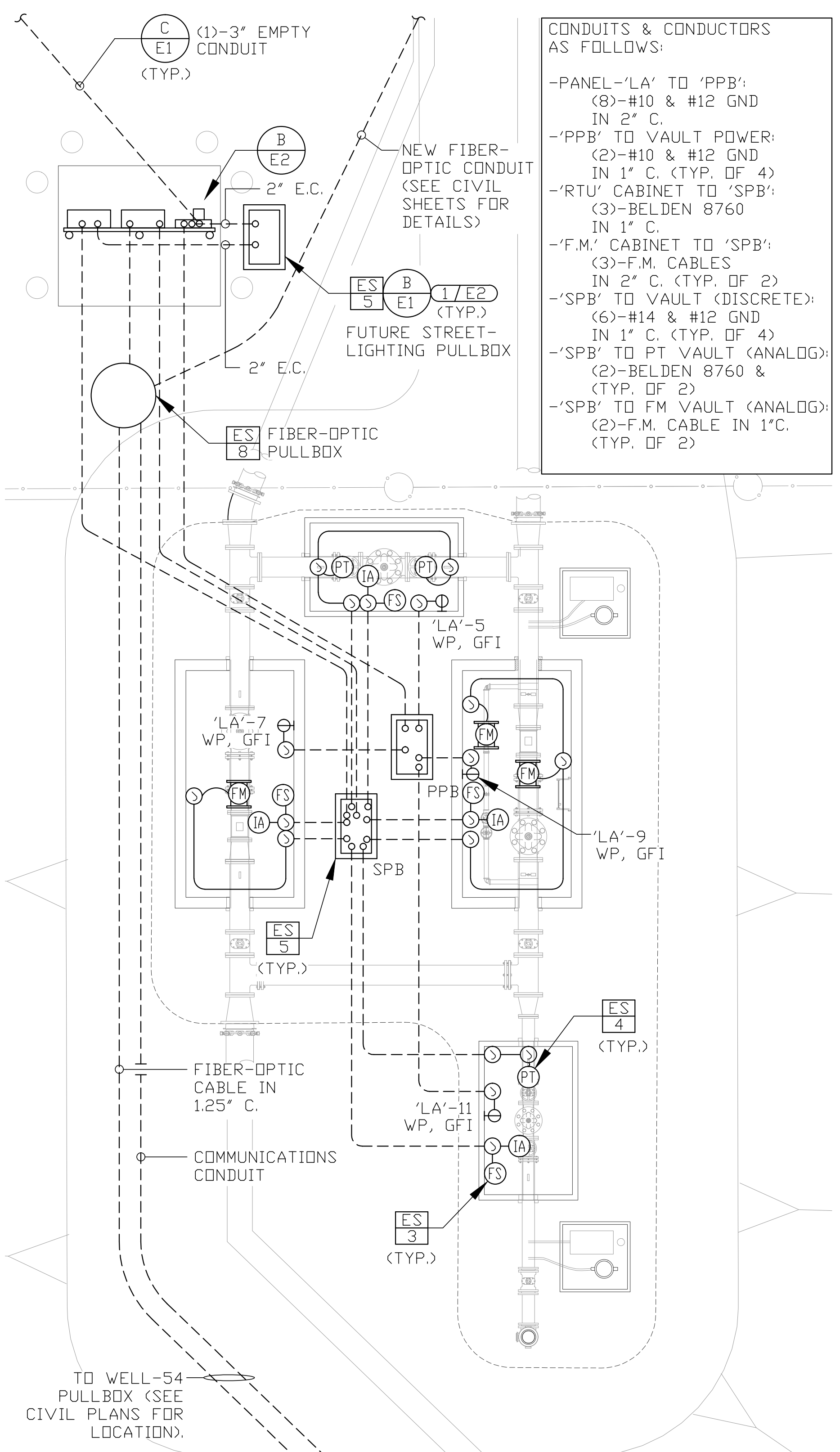
REV.	DATE	DESCRIPTION	BY	APP.
1				

VISTA GRANDE PRV STATIONS
PROJECT No: N39RP

E1 - LEGEND/NOTES, SITE PLAN, EQUIPMENT SCHEDULE, & DETAILS

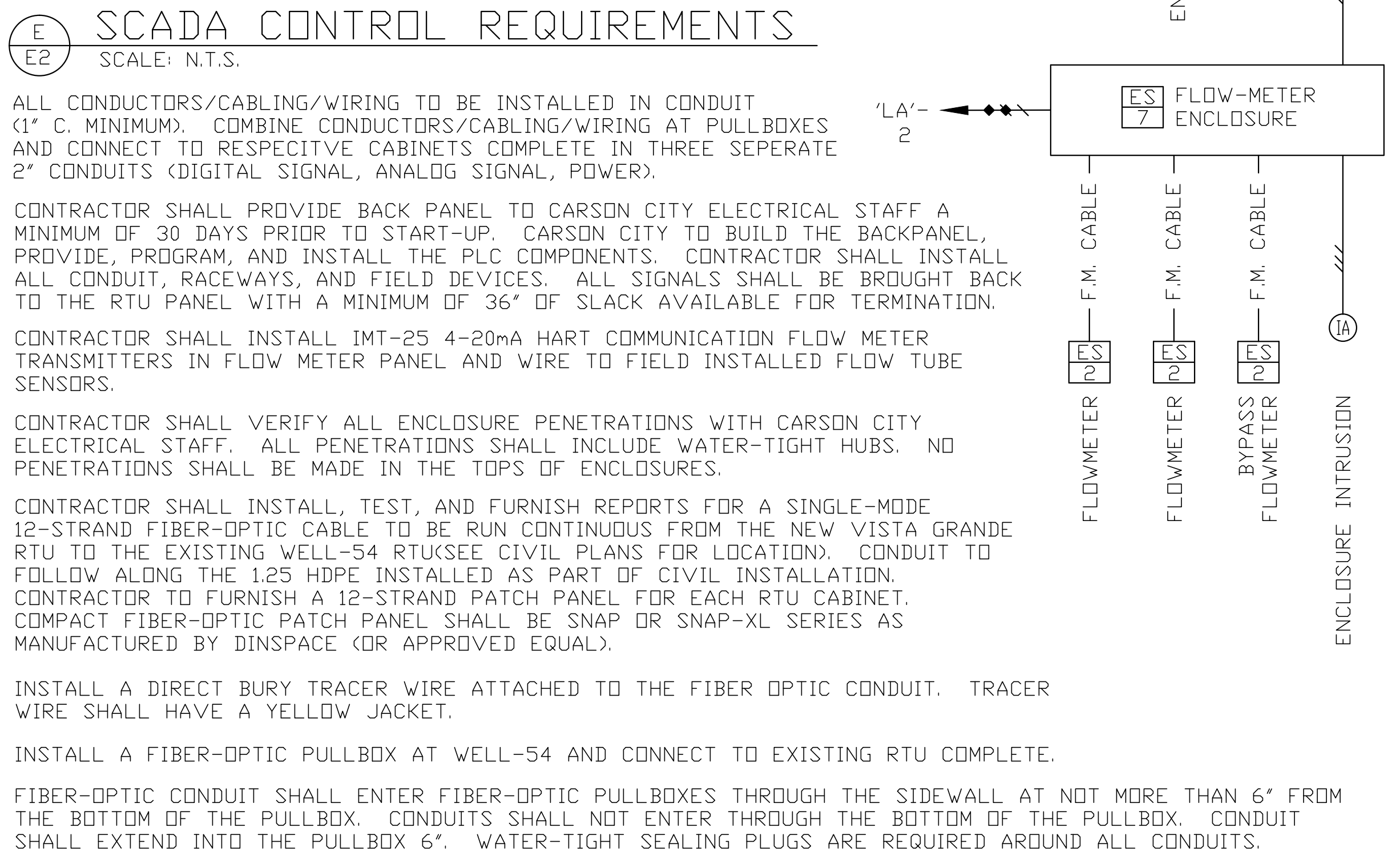
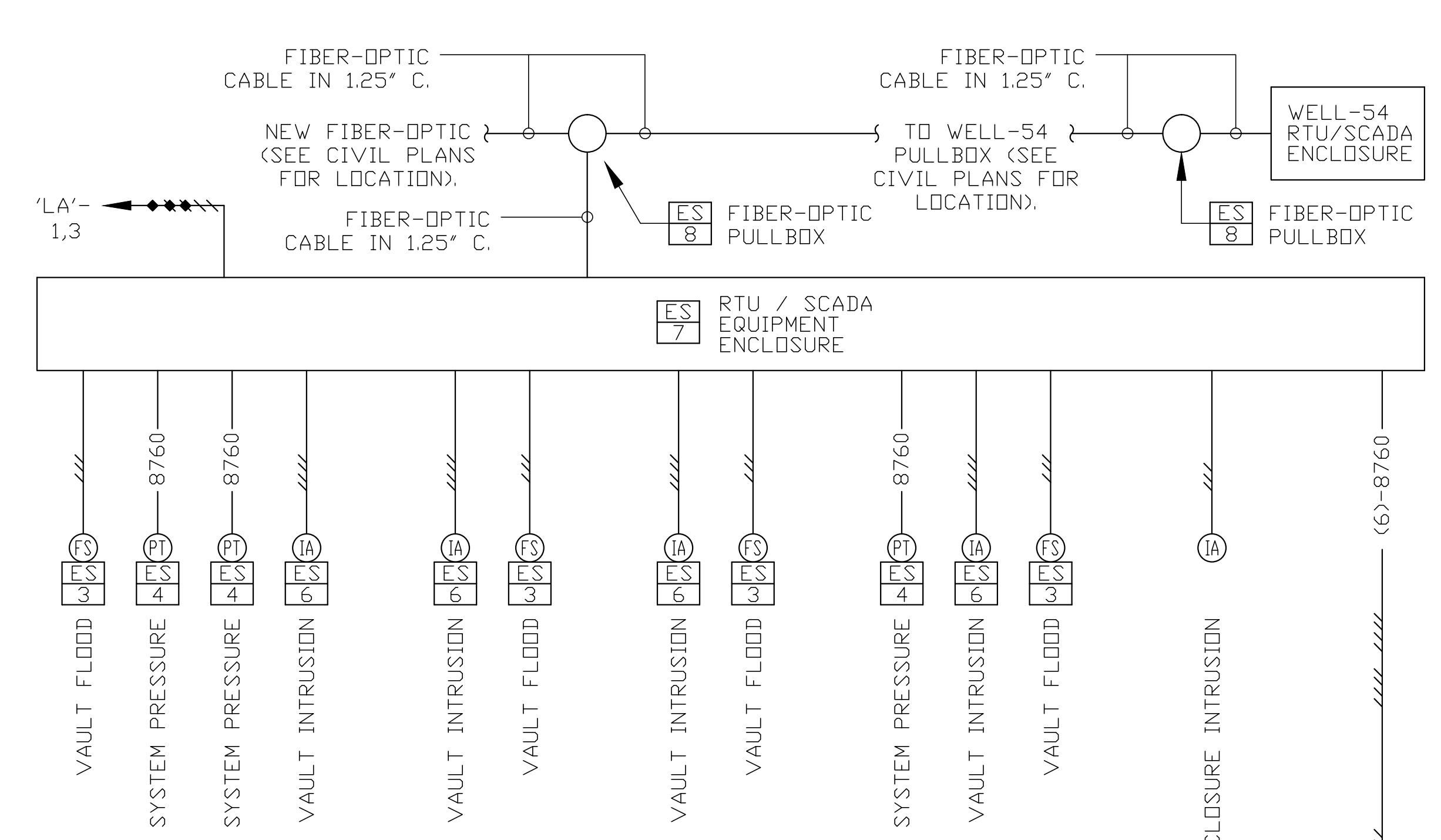
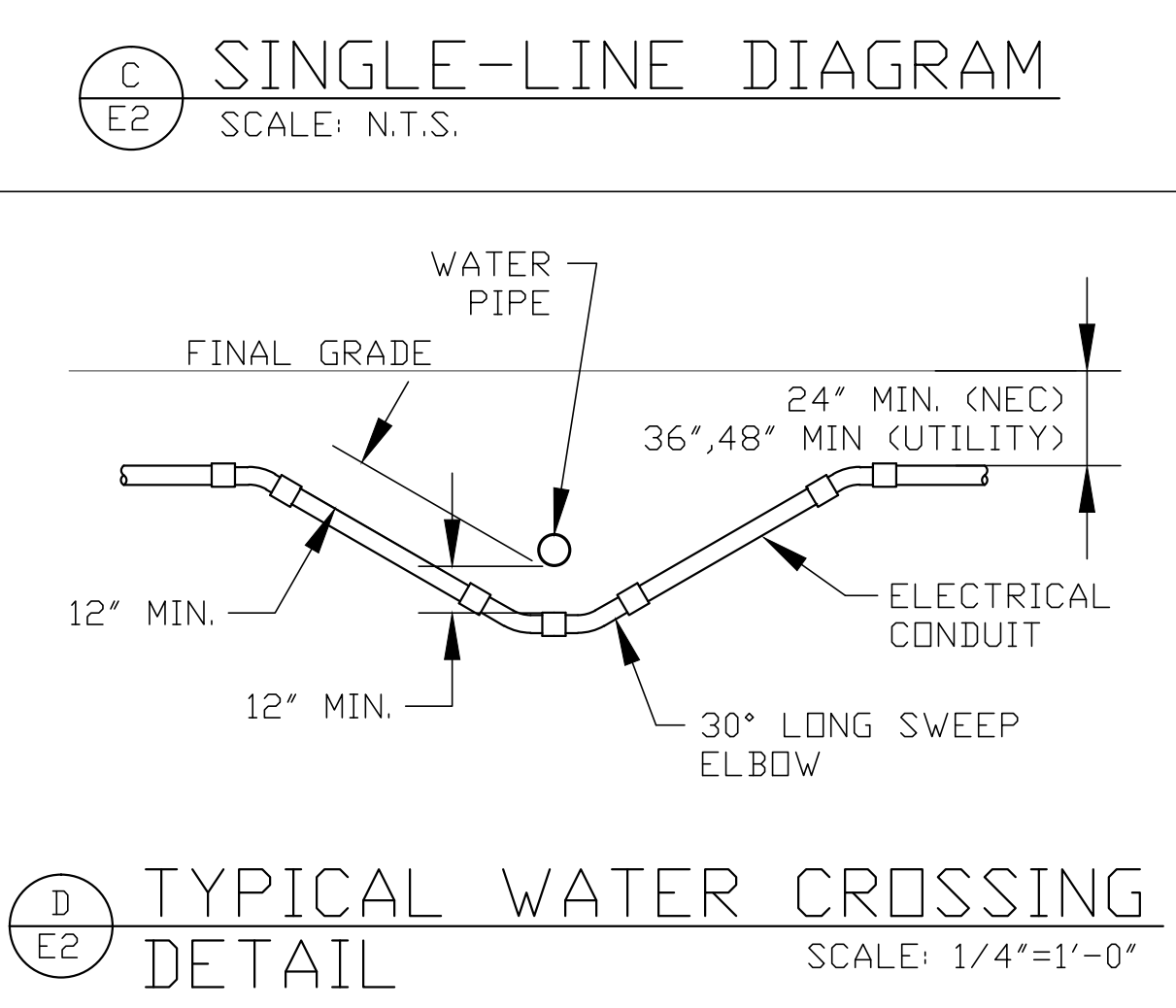
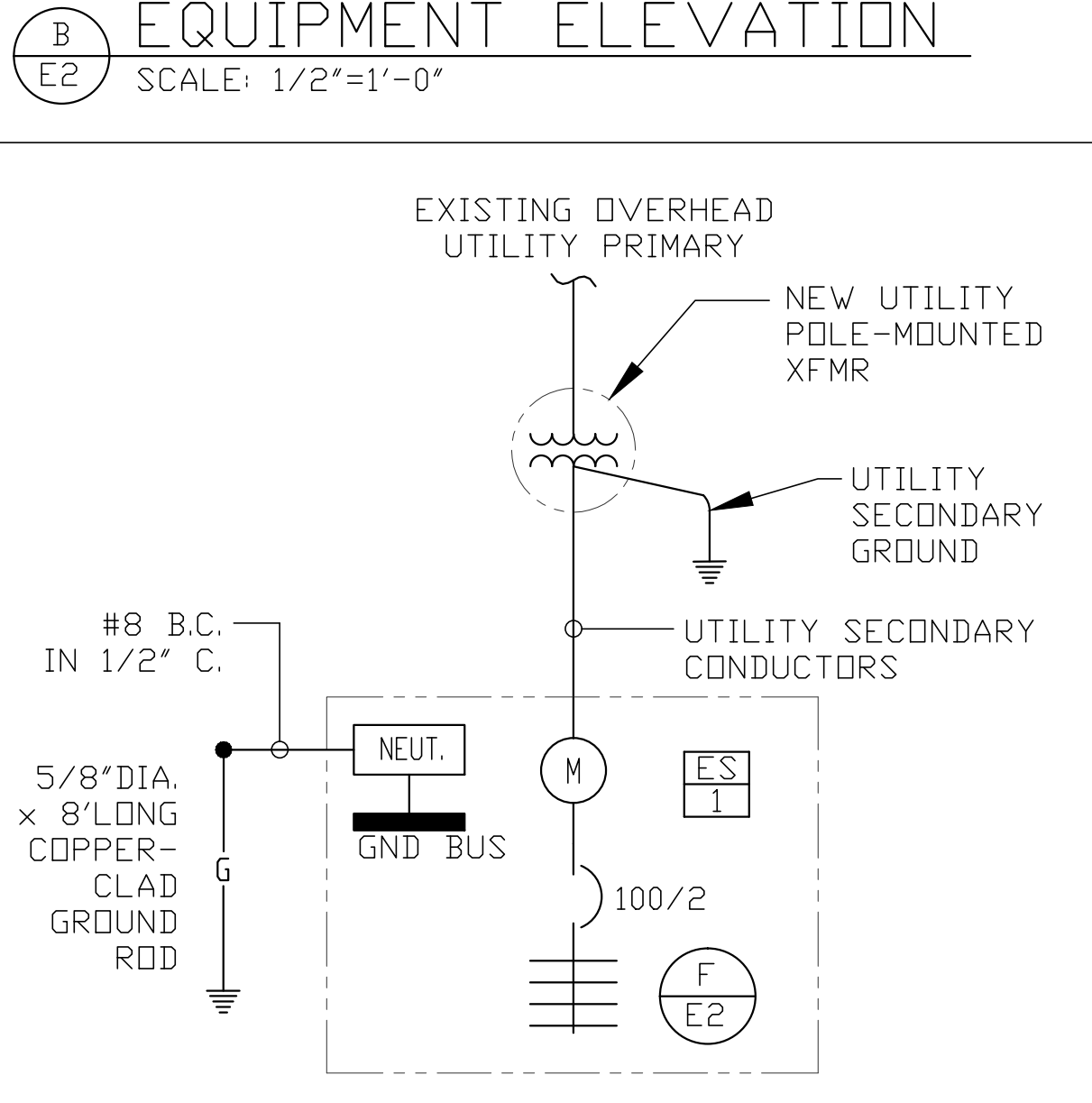
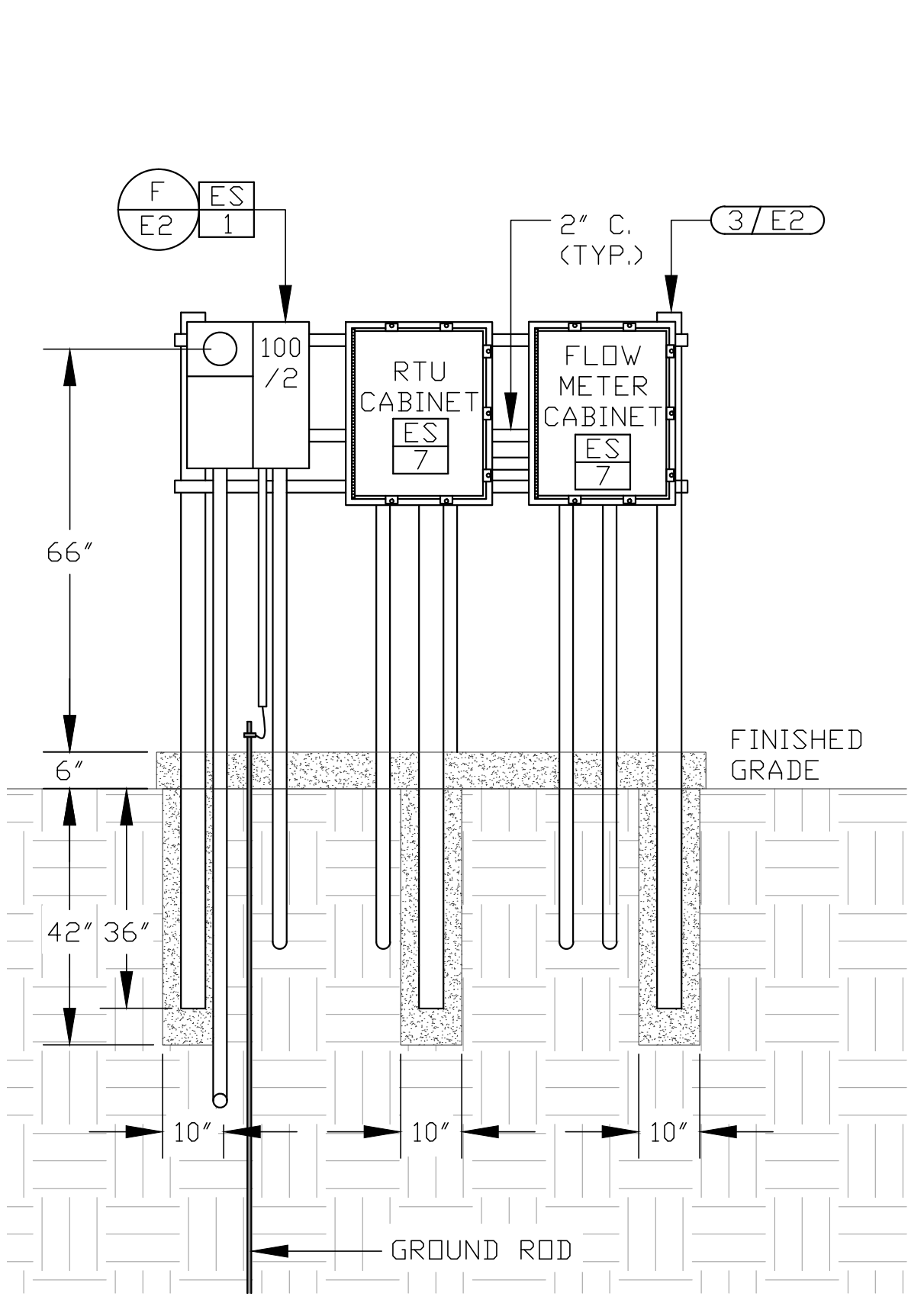
SHEET 21 OF 28

FOR BIDDING PURPOSES ONLY



SHEET NOTES

- FUTURE STREET LIGHTING PULLBOX. PROVIDE EMPTY CONDUIT TO PULLBOX FROM PANEL-'LA'.
- VERIFY ALL CONCRETE REINFORCEMENT AND POURING REQUIREMENTS WITH CIVIL / STRUCTURAL SPECIFICATIONS & REQUIREMENTS. FINAL CONCRETE PAD DIMENSIONS SHALL BE MODIFIED TO ACCOMMODATE EXACT SUPPLIED EQUIPMENT.
- MONIT EQUIPMENT ON A RACK COMPRISED OF THREE 4" SQUARE VERTICAL BOX TUBES AND UNIT-STRUT HORIZONTAL COMPONENTS. POUR POSTS IN CONCRETE WITH 6" THICK CONCRETE PAD. SEE CIVIL FOR DETAILS.



PROJ. MGR.: MJJ
 PROJ. ASSOC.: MJJ
 CHECKED BY: MJJ
 DWG NO.: N39RP
 SCALE (HORIZ):
 SCALE (VERT):
 PLOT DATE: 01-16-2014

CARSON CITY PUBLIC WORKS DEPARTMENT
 3606 BUTTE WAY CARSON CITY, NEVADA 89701
 PH: 897-2955

Manhard CONSULTING LTD.
 8476 Executive Pointe Way, Suite 12 Carson City, NV 89706
 PH: (775) 882-5650

1/21/14

REV. DATE DESCRIPTION BY APP.

VISTA GRANDE PRV STATIONS
 PROJECT No: N39RP
 SHEET 22 OF 28
 E2 - ELECTRICAL PLAN, DETAILS, ELEVATIONS, & DIAGRAMS

FOR BIDDING PURPOSES ONLY

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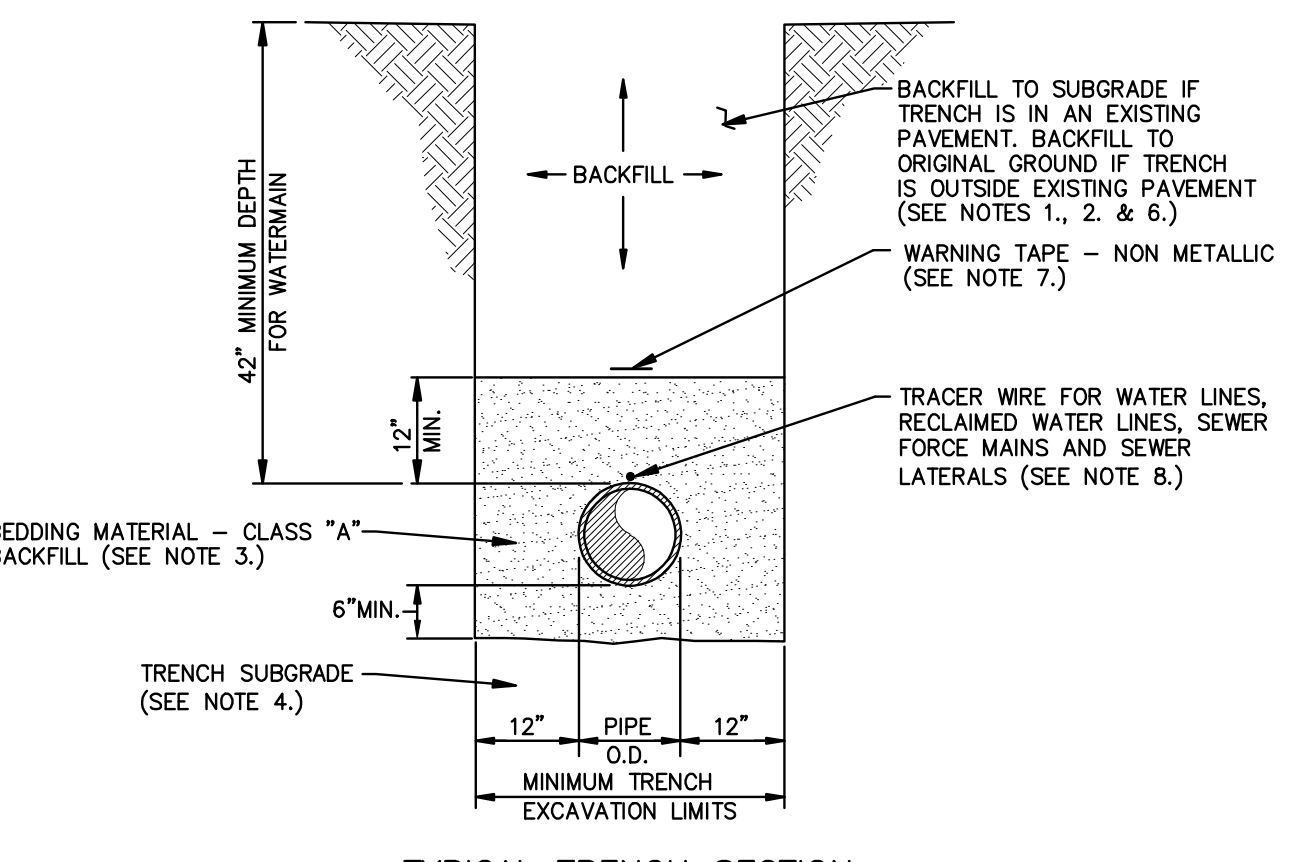
JENSEN ENGINEERING INC.
 Electrical Engineers
 9655 Gateway Drive Reno, Nevada 89521-2968
 Ph. (775) 852-2288 Fax (775) 852-3388
 email: jenen@enrbvbell.net web: www.jjeneng.com

- ALL WORK SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (SSPWC) AND THE "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION" (SDPW) AS ADOPTED BY CARSON CITY. THE CONTRACTOR SHALL OBTAIN A PERMIT FOR PUBLIC WORKS CONSTRUCTION FROM THE CARSON CITY PERMIT CENTER PRIOR TO THE START OF CONSTRUCTION.
- ALL TRAFFIC CONTROL AND BARRICADING WITHIN THE CARSON CITY RIGHT-OF-WAY SHALL CONFORM TO SECTION 100.33, 332.04 AND 332.05 OF THE STANDARD SPECIFICATIONS, PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND THE UNR 12 CENTER, TEMPORARY TRAFFIC CONTROL GUIDELINES LATEST EDITION. A TRAFFIC CONTROL PLAN MUST BE SUBMITTED AND APPROVED BY THE CARSON CITY ENGINEERING DIVISION PRIOR TO ANY STREET CLOSURES.
- THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT "CALL BEFORE YOU DIG" (811) OR (1-800-227-2600) AT LEAST TWO (2) WORKING DAYS PRIOR TO START OF CONSTRUCTION AND COMPLY WITH THE REQUIREMENTS OF NRS AND NAC 455 THROUGHOUT THE COURSE OF THE WORK. SEWER SERVICE LATERALS ARE NOT OWNED OR MARKED BY CARSON CITY.
- THE CONTRACTOR SHALL CALL THE CARSON CITY ENGINEERING DIVISION (887-2300) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL CALL ONE (1) WORKING DAY PRIOR TO REQUIRED INSPECTIONS AND TESTING. THE REQUIRED INSPECTIONS AND TESTING ARE LISTED ON THE INSPECTION RECORD ISSUED WITH EACH PERMIT. THE CONTRACTOR MUST HAVE THE PERMIT NUMBER AND THE DESCRIPTION LISTED ON THE INSPECTION RECORD TO SCHEDULE REQUIRED INSPECTIONS AND TESTING. FOR CITY CONTRACTED PROJECTS, THE CONTRACTOR SHALL SCHEDULE INSPECTIONS PER THE CONTRACT DOCUMENTS.
- FINAL INSPECTIONS WILL BE PERFORMED BY CARSON CITY ENGINEERING DIVISION ACCORDING TO THE CARSON CITY INSPECTIONS AND TESTING PROCEDURES. NOTE: THESE PROCEDURES REQUIRE SUBMITTAL OF RECORD DRAWING PRINTS BY THE CONTRACTOR AND 10 WORKING DAYS TO PREPARE A FINAL PUNCH LIST. ALL CONDITIONS OF THE FINAL INSPECTION MUST BE COMPLETED PRIOR TO FINAL ACCEPTANCE OR ANY APPROVAL OF A CERTIFICATE OF OCCUPANCY BY THE CARSON CITY ENGINEERING DIVISION.
- MODIFICATIONS TO THE APPROVED PLANS REQUIRES REVIEW AND APPROVAL BY THE CARSON CITY ENGINEERING DIVISION. WORK PERFORMED WITHOUT WRITTEN APPROVAL BY CARSON CITY ENGINEERING WILL REQUIRE REMOVAL AT THE CONTRACTORS EXPENSE.
- THE APPROVED PLAN, PERMIT AND INSPECTION RECORD MUST BE ON THE JOB SITE AT ALL TIMES.
- PLAN APPROVAL FOR SEWER AND WATER CONSTRUCTION SHALL EXPIRE ONE YEAR FROM DATE OF APPROVAL UNLESS CONSTRUCTION HAS BEEN INITIATED. (CMC 12.06.180F, 12.01.140D)
- THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR ACQUIRING A STORMWATER DISCHARGE PERMIT FROM THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP) INCLUDING DEVELOPING, SUBMITTING AND IMPLEMENTING A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL DEVELOP, PLACE AND MAINTAIN STORM WATER PROTECTION DEVICES IN COMPLIANCE WITH THE NEVADA CONTRACTORS FIELD GUIDE FOR CONSTRUCTION SITE BEST MANAGEMENT PRACTICES (JUNE 2008).

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
				DRAWING NO. C-1.1.1
				DATE 7/2009

APPROVED BY: [Signature] 7/09

GENERAL NOTES

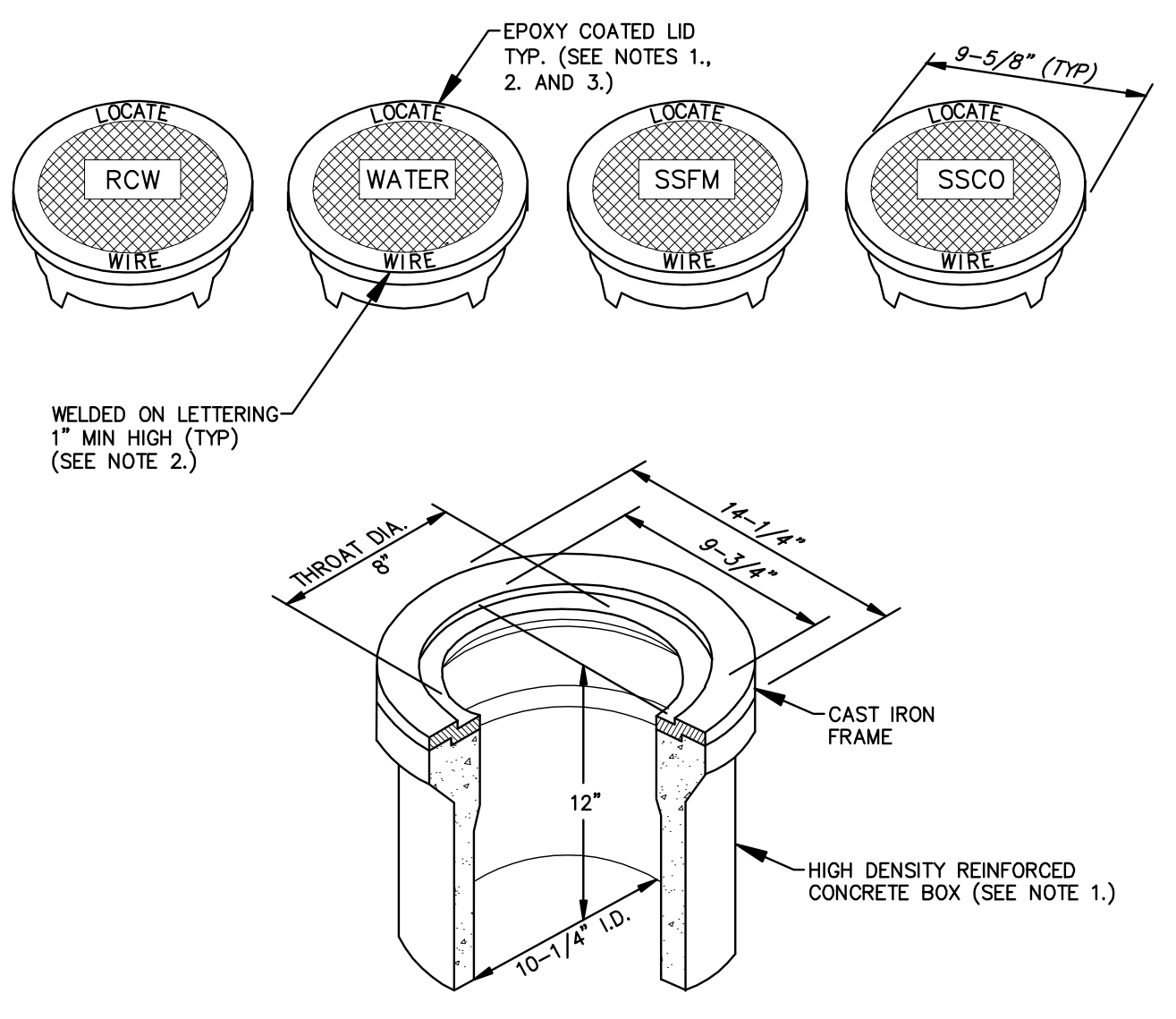


- NOTES:**
- WATER DENSIFIED BACKFILL AND TUNNELING SHALL BE BY SPECIAL PROVISION ONLY.
 - BACKFILL SHALL CONFORM TO THE REQUIREMENTS OF CLASS E BACKFILL AS SPECIFIED IN SUBSECTION 200.03.06 OF THE SSPWC. MATERIAL SHALL BE PLACED IN LIFT THICKNESS SPECIFIED IN SUBSECTION 305.10 OF THE SSPWC AND DENSIFIED TO 90% RELATIVE COMPACTION.
 - BEDDING SHALL CONFORM TO THE REQUIREMENTS OF CLASS A BACKFILL AS SPECIFIED IN SUBSECTION 200.03.02 OF THE SSPWC. MATERIAL SHALL BE DENSIFIED TO 90% RELATIVE COMPACTION.
 - PLANS SHALL INCLUDE A DETAIL FOR SUBGRADE STABILIZATION INCLUDING BACKFILL MATERIAL, STRUCTURAL GEOTEXTILE FILTER FABRIC AND MODIFIED CUTOFF COLLARS WHEN POTENTIAL FOR UNSTABLE SUBGRADES EXIST, SUBJECT TO THE APPROVAL OF THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.
 - FOR TRENCHES IN ROADWAY SECTION, SEE PAVEMENT PATCH DETAIL (DWG. NO. C-5.1.5).
 - FOR THE PURPOSE OF PAYMENT; EXCAVATION AND BACKFILL QUANTITIES ARE BASED ON THESE STANDARD DRAWINGS, AND NO ADDITIONAL COMPENSATION WILL BE MADE. SHORING OR SLOPED CUT SLOPES MAY BE NECESSARY, BUT THERE WILL BE NO ADDITIONAL PAYMENT. ALL EXCAVATIONS SHALL CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.
 - PLACE NON METALLIC WARNING TAPE 1 FOOT ABOVE ALL BURIED PIPES AND CONDUITS.
 - TRACER WIRE SHALL BE 12 GAUGE (MINIMUM THICKNESS) INSULATED SOLID COPPER OR COPPER-CLAD STEEL CORE WIRE. INSULATION SHALL BE 30 MIL HDPE. PLANS SHALL SPECIFY WIRE STRENGTH AND INSULATION THICKNESS FOR BORING APPLICATIONS. SPLICES SHALL BE CONNECTED BY WIRE NUTS, SEALED WITH AQUA SEAL OR SILICON FILLED, AND DOUBLE WRAPPED WITH U/L LISTED ELECTRICAL TAPE. TRACER WIRE COLOR SHALL BE, BLUE FOR WATER, PURPLE FOR RECLAIMED WATER, AND GREEN FOR SEWER.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
				DRAWING NO. C-2.2.3 (306,307)
				DATE 7/2009

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TRENCH EXCAVATION AND BACKFILL

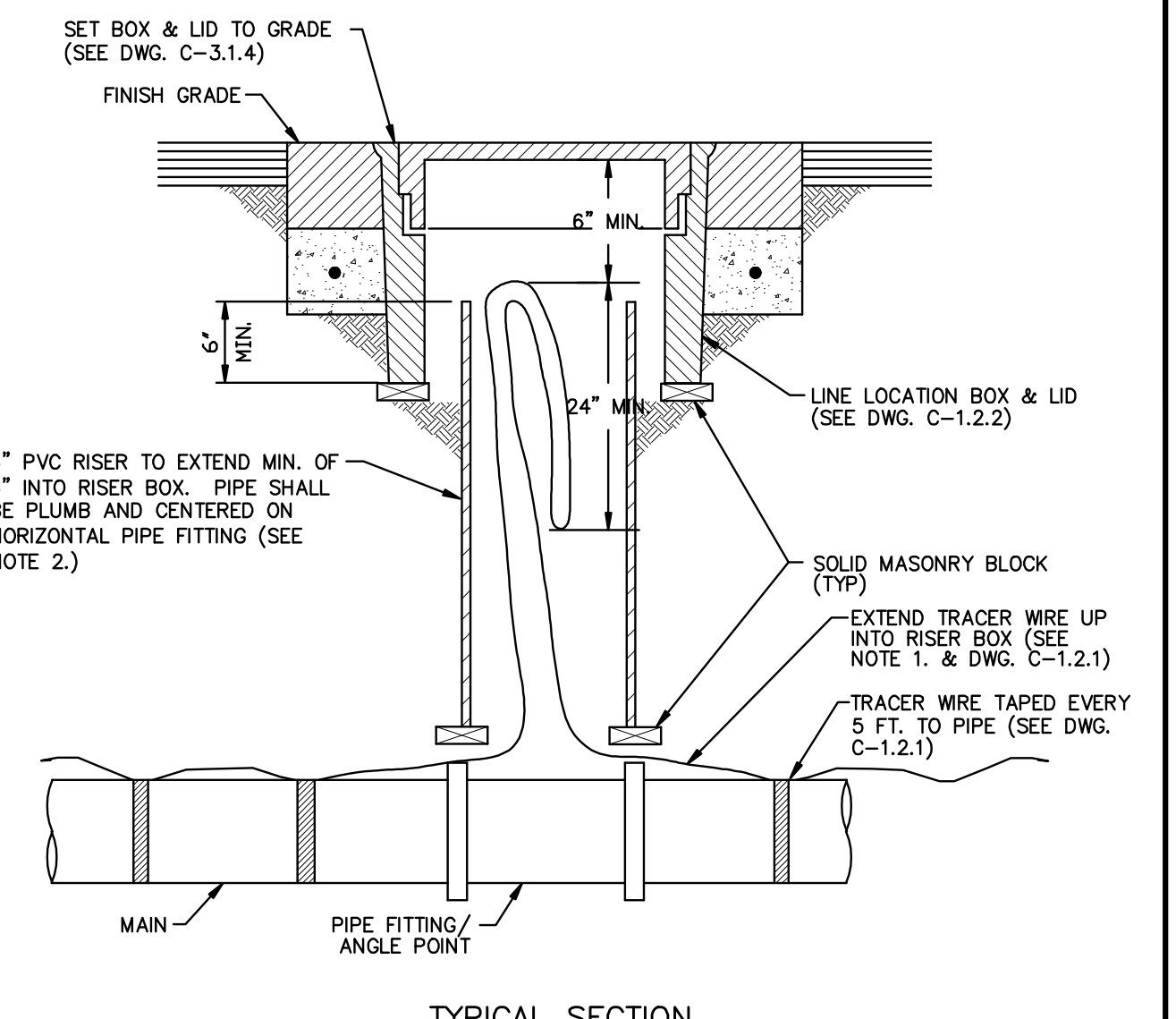


- NOTES:**
- BOX AND LID SHALL BE TRAFFIC RATED WITH A MINIMUM INSIDE DIAMETER OF 10 INCHES (CHRISTY G3 TRAFFIC VALVE BOX & LID).
 - CAST IRON LID SHALL BE MARKED AT THE FACTORY "LOCATE WIRE", AND "WATER" FOR WATER APPLICATIONS, "RCW" FOR RECLAIMED WATER APPLICATIONS, "SSFM" FOR SANITARY SEWER FORCE MAIN APPLICATIONS, AND "SSCO" FOR SANITARY SEWER CLEANOUT APPLICATIONS.
 - CAST IRON LID SHALL BE EPOXY COATED AT THE FACTORY, OR POWDER COATED, COLOR SHALL BE BLUE FOR WATER APPLICATIONS, PURPLE FOR RECLAIMED WATER APPLICATIONS AND GREEN FOR SANITARY SEWER APPLICATIONS.
 - BOX SHALL BE SET OR ADJUSTED TO GRADE PER DRAWING NO. C-3.1.4. RISER FOR ADJUSTED BOX SHALL BE PER DRAWING NO. C-3.1.4 FOR OVERLAY ADJUSTMENTS, RISER WILL NOT REQUIRE REPLACEMENT OR EXTENSION IF IT EXTENDS A MINIMUM OF 2 INCHES INTO ADJUSTED BOX.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
				DRAWING NO. C-1.2.2
				DATE 7/2009

APPROVED BY: [Signature] 7/09

LINE LOCATION RISER



- NOTES:**
- WIRE SHALL BE CONTINUOUS IN RISER AND SHALL NOT BE SPLICED WITHIN 10 FEET OF RISER.
 - RISER COLOR SHALL BE BLUE, OR SAME COLOR AS MAIN FOR WATER APPLICATIONS, PURPLE FOR RECLAIMED WATER APPLICATIONS, AND GREEN FOR SANITARY SEWER APPLICATIONS.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
				DRAWING NO. C-1.2.3 (203,306)
				DATE 7/2009

APPROVED BY: [Signature] 07/09

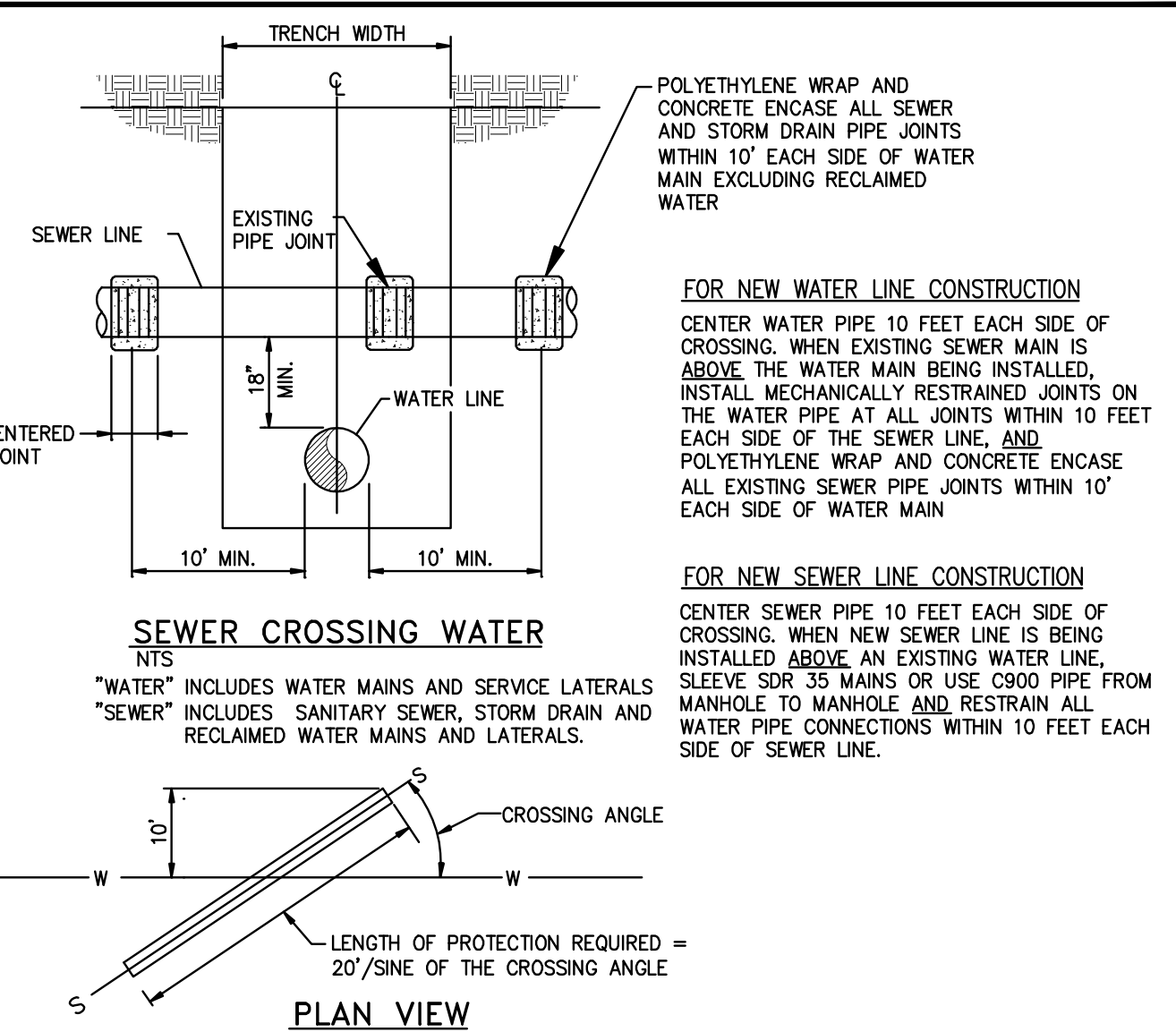
VALVE BOX & LID

- WATER MAIN SHUTDOWNS/INTERRUPTION OF WATER/FIRE SERVICE; OBTAIN TENTATIVE APPROVAL FROM CARSON CITY WATER UTILITY PRIOR TO PLANNING A SHUTDOWN. APPROVAL IS REQUIRED ONE WORKING DAY PRIOR TO NOTIFICATION OF CUSTOMERS. COMMERCIAL CUSTOMERS SHALL RECEIVE 2 WORKING DAYS NOTICE OF A SHUTDOWN. SPECIAL ARRANGEMENTS INCLUDING NIGHT TIME SHUTDOWNS MAY BE REQUIRED OF THE CONTRACTOR TO ACCOMMODATE CUSTOMER OPERATIONS. RESIDENTIAL CUSTOMERS SHALL RECEIVE 24 HOURS WRITTEN NOTICE. WHEN WORK IS PERFORMED BY CITY STAFF, THE CITY IS RESPONSIBLE FOR THE NOTIFICATION. THE CONTRACTOR IS RESPONSIBLE IN ALL OTHER CASES. A LIST SHALL BE KEPT BY THE RESPONSIBLE PARTY LISTING THE DATE, TIME AND ADDRESS OF ALL PERSONS NOTIFIED. THE PERSON NOTIFIED SHALL BE INCLUDED ON THE LIST FOR ALL COMMERCIAL CUSTOMERS. CONTACT CARSON CITY WATER UTILITY FOR PHONE NUMBERS WHEN COMMERCIAL CUSTOMERS CANNOT BE LOCATED. THE CONTRACTOR WILL BE SUBJECT TO DAMAGE CLAIMS SHOULD THEY FAIL TO NOTIFY CUSTOMERS OR MAINTAIN DOCUMENTATION OF NOTIFICATION OF CUSTOMERS. THE TOTAL TIME OF ANY WATER SERVICE INTERRUPTION IS LIMITED TO 4 HOURS MAXIMUM. THE CONTRACTOR SHALL NOT OPERATE ANY EXISTING WATER VALVES. WATER MAIN SHUTDOWNS WILL ONLY BE SCHEDULED FOR TUESDAYS, WEDNESDAYS, OR THURSDAYS, EXCLUDING THE WORKING DAYS BEFORE AND AFTER A HOLIDAY. CONTRACTOR SHALL MAKE A WRITTEN REQUEST TO THE WATER OPERATIONS CHIEF, A MINIMUM OF 10 CALENDAR DAYS IN ADVANCE OF ANY PLANNED SHUTDOWN.
- WATER MAINS (6 INCH THRU 12 INCH) SHALL BE PVC C900, DR 18 (MINIMUM WALL THICKNESS) UNLESS HIGHER PRESSURE IS SPECIFIED ON THE PLANS. WATER SERVICES 2 INCHES OR LESS SHALL BE CTS, PE TUBING MINIMUM 200 PSI; WATER SERVICES 3 INCHES OR GREATER SHALL BE 4 INCH MINIMUM DIAMETER PVC C900, DR 18 OR AS SPECIFIED ON THE PLANS.
- MAINTAIN 18 INCHES VERTICAL AND 5 FEET HORIZONTAL SEPARATION BETWEEN ALL UNDERGROUND UTILITY LINES AND WATER LINES. IF WATER LINE IS BELOW POWER LINE OR IS WITHIN 18 INCH VERTICAL SEPARATION OF POWER LINE, POWER/TELEPHONE LINE SHALL BE ENCASED WITH 4 INCHES MINIMUM OF CONCRETE, EXTENDING 5 FEET EACH SIDE OF CROSSING. (SEE NV ENCASED SPECS.) CONCRETE ENCASEMENT OF WATER LINES IS NOT ALLOWED.
- ALL HOT TAPS, GREATER THAN 2 INCHES AND LESS THAN 14 INCHES, ARE TO BE PERFORMED BY CARSON CITY WATER UTILITY. THE CONTRACTOR SHALL CONTACT THE WATER OPERATIONS CHIEF AT LEAST 2 WORKING DAYS PRIOR TO SCHEDULING HOT TAP DATE AND TIME (HOT TAPS ARE PERFORMED TUESDAY THRU THURSDAY EXCLUDING THE WORKING DAYS BEFORE AND AFTER A HOLIDAY). PRIOR TO HOT TAPPING, THE SADDLE SHALL BE HYDROSTATICALLY PRESSURE TESTED TO 150 PSI MINIMUM OR THE DESIGN OF PIPE SYSTEM FOR A MINIMUM OF 5 MINUTES. THE TEST SHALL BE PERFORMED IN THE PRESENCE OF THE WATER UTILITY PERSONNEL PRIOR TO PERFORMING THE TAP.
- WATER VALVE MARKERS SHALL BE BLUE CARSONITE UTILITY MARKER (CUM-375), 5 FEET-2 INCHES (5'-2") WITH CARSON CITY WATER VALVE DECAL (CWV-116) OR APPROVED EQUAL. PLACE MARKER NO MORE THAN 5 FEET FROM THE VALVE OR AS DIRECTED BY THE CARSON CITY INSPECTOR.
- REDUCED PRESSURE PRINCIPLE AND DOUBLE CHECK VALVE BACKFLOW ASSEMBLIES SHALL BE APPROVED BY THE CARSON CITY INSPECTOR, AND TESTED BY A CERTIFIED BACKFLOW ASSEMBLY TESTER, AND TEST RESULTS SHALL BE APPROVED BY CARSON CITY WATER UTILITY. FOR NEW WATER METER SETS, THE REQUIRED BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED, INSPECTED, APPROVED AND CERTIFIED TEST RESULTS PROVIDED TO THE CARSON CITY INSPECTOR WITHIN 5 DAYS OF METER SET, UNLESS THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR APPROVES OTHERWISE. THE SERVICE WILL BE LOCKED OFF IF INSPECTIONS AND CERTIFICATIONS ARE NOT COMPLETED AS SPECIFIED ABOVE. A 25 DOLLAR FEE WILL BE ASSESSED AT TIME OF TURN-ON WHEN LOCK IS REMOVED DURING NORMAL WORKING HOURS. THE FEE WILL BE ASSESSED ON THE BUILDING PERMIT FOR THE INSTALLATION OF THE BACKFLOW DEVICE.
- ALL WATER MAIN, WATER/FIRE SERVICE, AND BACKFLOW PREVENTION INSPECTIONS AND TESTING MUST BE APPROVED PRIOR TO APPROVAL OF ANY CERTIFICATE OF OCCUPANCY.
- DISINFECTION TABLETS SHALL BE PLACED USING TITENOND MULTI-PURPOSE CLEAR 100% SILICONE OR APPROVED EQUAL FOOD GRADE SILICONE

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
				DRAWING NO. C-3.1.1 (307)
				DATE 7/2009

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WATER GENERAL NOTES

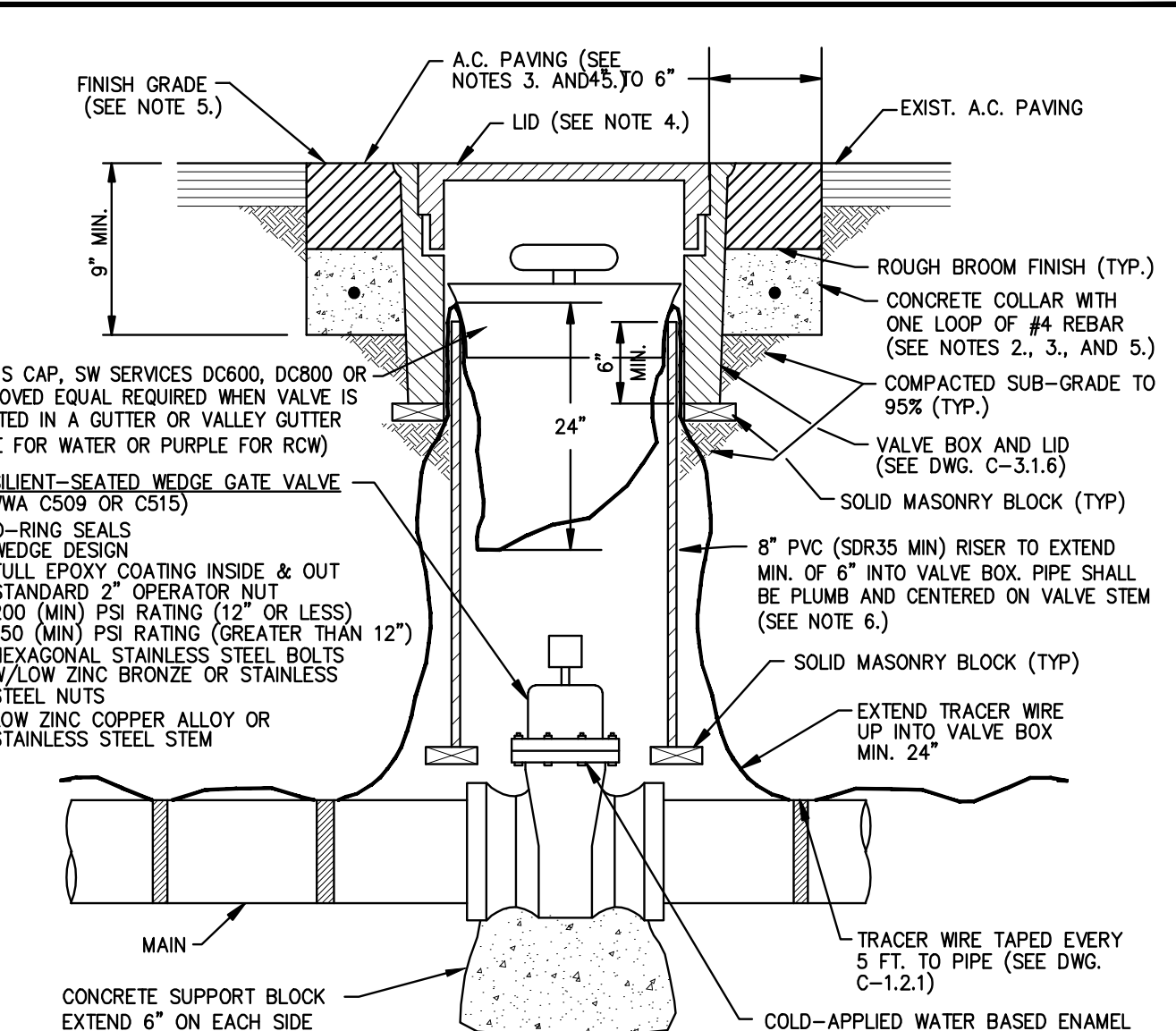


- NOTES:**
- PROVIDE 18 INCHES MINIMUM OF VERTICAL SEPARATION BETWEEN WATER, SEWER AND STORM DRAIN LINES. WHEN SEPARATION CANNOT BE OBTAINED, AND IN CASES WHERE WATER LINES MUST BE ROUTED UNDER EXISTING SEWER OR STORM DRAIN LINES, LOWER WATER MAIN PER STANDARD DETAIL NO. C-3.1.8 OR C-3.1.9 IF TRENCH WIDTH EXCEEDS 36 INCHES, THEN PROVIDE CONCRETE SUPPORT PER STANDARD DETAIL DRAWING NO. 2-17.
 - WATER AND WASTEWATER LATERALS SHALL BE PE TUBING CONFORMING TO AWWA STANDARD C901-02 AND ASTM D2737.
 - IF WATER LINE IS 18 INCHES OR GREATER ABOVE THE SEWER LINE OR STORM DRAIN LINE, NO SPECIAL CONSTRUCTION IS REQUIRED.
 - ALL PROVISIONS ABOVE SHALL APPLY FOR CROSSINGS TO THE POINT AT WHICH THE 10 FOOT SEPARATION BETWEEN THE WATER AND SEWER OR STORM DRAIN LINE IS ACHIEVED (10 FEET/SINE OF CROSSING ANGLE).
 - FOR PURPOSES OF SEPARATIONS AND PROTECTION OF THE WATER SUPPLY, A RECLAIMED WATER LINE SHALL BE CONSIDERED A SEWER LINE. NO CONCRETE SHALL BE PLACED ON RECLAIMED WATER PIPE JOINTS.
 - ENCASEMENT SLURRY BACKFILL SHALL BE TYPE B (NON-EXCAVATABLE) WITH A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 3000 (PSI) AND MEET THE REQUIREMENTS OF TABLE 337.08.01-1.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
				DRAWING NO. C-3.1.2
				DATE 4/2009

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WATER CROSSING GRAVITY SANITARY SEWER AND STORM DRAIN

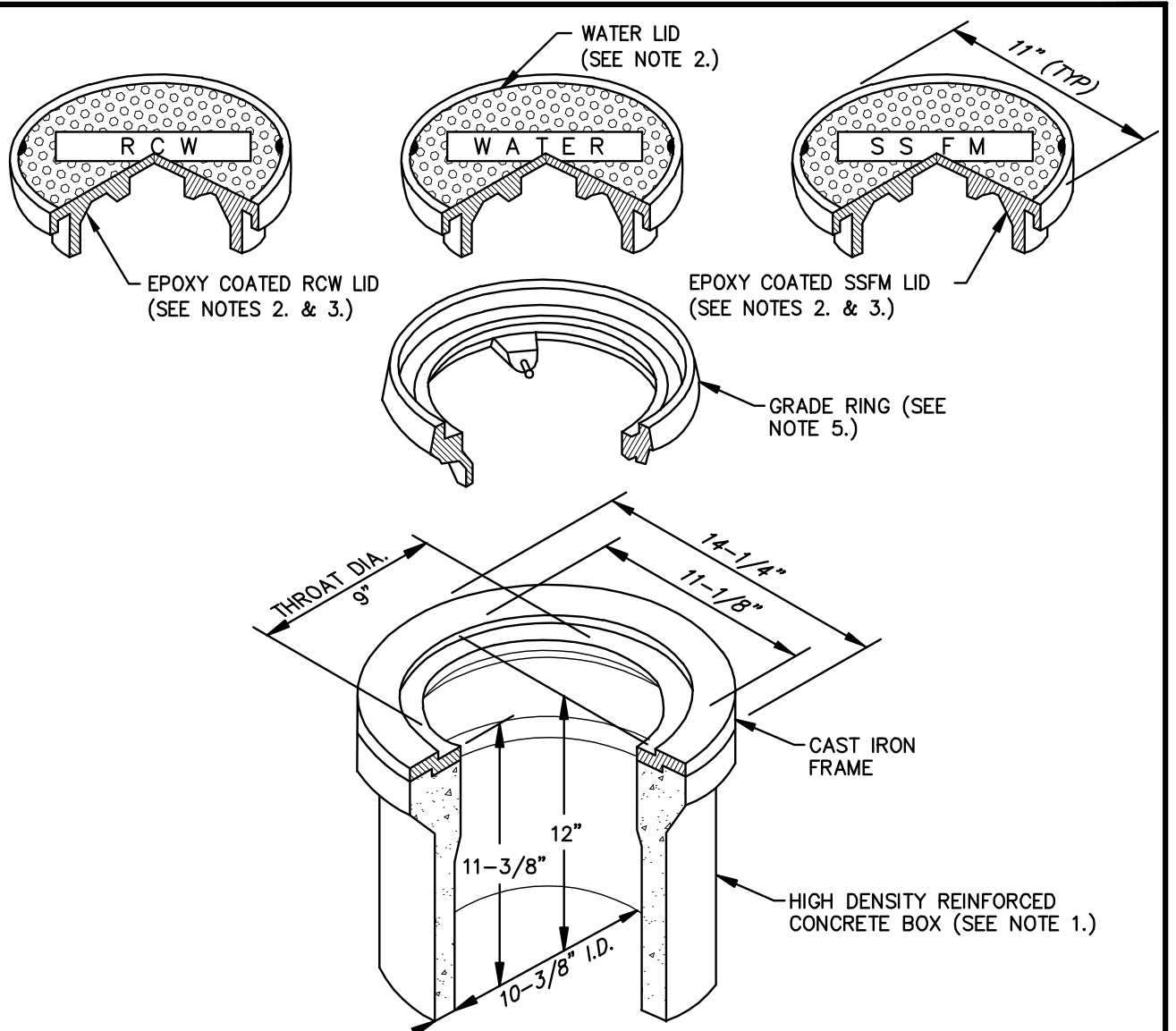


- NOTES:**
- SUPPORT BLOCKING SHALL BE POURED AGAINST UNDISTURBED SOIL AND NOT PREVENT ACCESS TO BOLT ASSEMBLY OR VALVE JOINTS.
 - CONCRETE SHALL CONFORM TO THE SSPWC SECTION 337.10. REBAR SHALL ONLY BE USED WHEN THE VALVE BOX IS LOCATED OUTSIDE PAVED AREAS.
 - THE CONCRETE COLLAR SHALL BE LEFT 2 1/2 INCHES - 3 INCHES BELOW FINISHED ASPHALT SURFACE. APPLY AN APPROVED TACK COAT (CONFORMING TO THE SSPWC SECTION 316) AND FILL VOID BETWEEN ADJACENT PAVEMENT AND FRAME WITH TYPE 3 PG 64-22 PAVING (CONFORMING TO THE SSPWC SECTION 320). APPLY FOG SEAL (CONFORMING TO THE SSPWC SECTION 317) TO THE ASPHALT SURFACE. ALL CUTS IN PAVING SHALL BE STRAIGHT AND EVEN. EXCEPTION: WHEN STRUCTURE NOT LOCATED IN ASPHALT PAVEMENT OR IN AN UNPAVED AREA, EXTEND CONCRETE TO FINISH GRADE.
 - LIDS SHALL BE SET FLUSH WITH FINISH GRADE UNLESS OTHERWISE NOTED.
 - WHEN LOCATED IN NDOT RIGHT-OF-WAY, CONCRETE COLLAR SHALL CONFORM TO NDOT STANDARD PLAN SHT R-4.3.3 AND STANDARD SPECIFICATION 609.
 - RISER COLOR SHALL BE BLUE, OR SAME COLOR AS MAIN FOR WATER APPLICATIONS, PURPLE FOR RECLAIMED WATER APPLICATIONS, AND GREEN FOR SANITARY SEWER APPLICATIONS.
 - VALVES ON FIRE LINES SHALL BE UL/FM APPROVED AND MEET ALL APPLICABLE NFPA REQUIREMENTS.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
				DRAWING NO. C-3.1.4 (203,307)
				DATE 7/2009

APPROVED BY: [Signature] 07/09

VALVE BOX & LID



- NOTES:**
- VALVE BOX AND LID SHALL BE H20 TRAFFIC RATED WITH A MINIMUM INSIDE DIAMETER OF 10 INCHES (CHRISTY G3 TRAFFIC VALVE BOX & LID).
 - CAST IRON LID SHALL BE MARKED AT THE FACTORY "WATER" FOR WATER APPLICATIONS, "RECLAIMED WATER" OR "RCW" FOR RECLAIMED WATER APPLICATIONS, AND "SS FM" FOR SANITARY SEWER APPLICATIONS.
 - FOR RECLAIMED WATER AND SANITARY SEWER APPLICATIONS, CAST IRON LID SHALL BE EPOXY COATED AT THE FACTORY, OR POWDER COATED, COLOR SHALL BE PURPLE FOR RECLAIMED WATER APPLICATIONS AND GREEN FOR SANITARY SEWER APPLICATIONS.
 - VALVE BOX SHALL BE SET OR ADJUSTED TO GRADE PER DRAWING NO. C-3.1.4. RISER FOR ADJUSTED VALVE BOX SHALL BE PER DRAWING NO. C-3.1.4. FOR OVERLAY ADJUSTMENTS, RISER WILL NOT REQUIRE REPLACEMENT OR EXTENSION IF IT EXTENDS A MINIMUM OF 2 INCHES INTO ADJUSTED VALVE BOX.
 - GRADE RING IS NOT ALLOWED FOR NEW VALVE BOX INSTALLATIONS. CAST IRON GRADE RING (CHRISTY G3 GRADE RING) MAY BE USED FOR OVERLAY ADJUSTMENTS WHEN OVERLAY DEPTH EQUALS THE GRADE RING DEPTH. NO MORE THAN ONE GRADE RING ALLOWED PER BOX.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
				DRAWING NO. C-3.1.6 (203,306,307)
				DATE 7/2009

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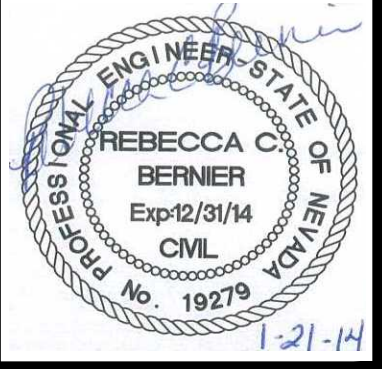
VALVE BOX & LID

RCB
CIT
RCB
CCTCN15
CCTCN15
SCALE (HORIZ):
SCALE (VERT):
PILOT DATE: JAN 2014

PROJ. MGR.:
PROJ. ASSOC.:
CHECKED BY:
DWG NO.:
DATE: 7/2009

CARSON CITY DEPARTMENT
PUBLIC WORKS
3505 BUTTE WAY CARSON CITY, NEVADA 89701
PH: 887-2355 FAX: 887-2112

Manhard CONSULTING LTD.
18476 Paradise Parkway, Suite 12
Las Vegas, NV 89130
PH: (775) 882-5680 FAX: (775) 882-7282



NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
				DRAWING NO. C-1.2.3 (203,306)
				DATE 7/2009

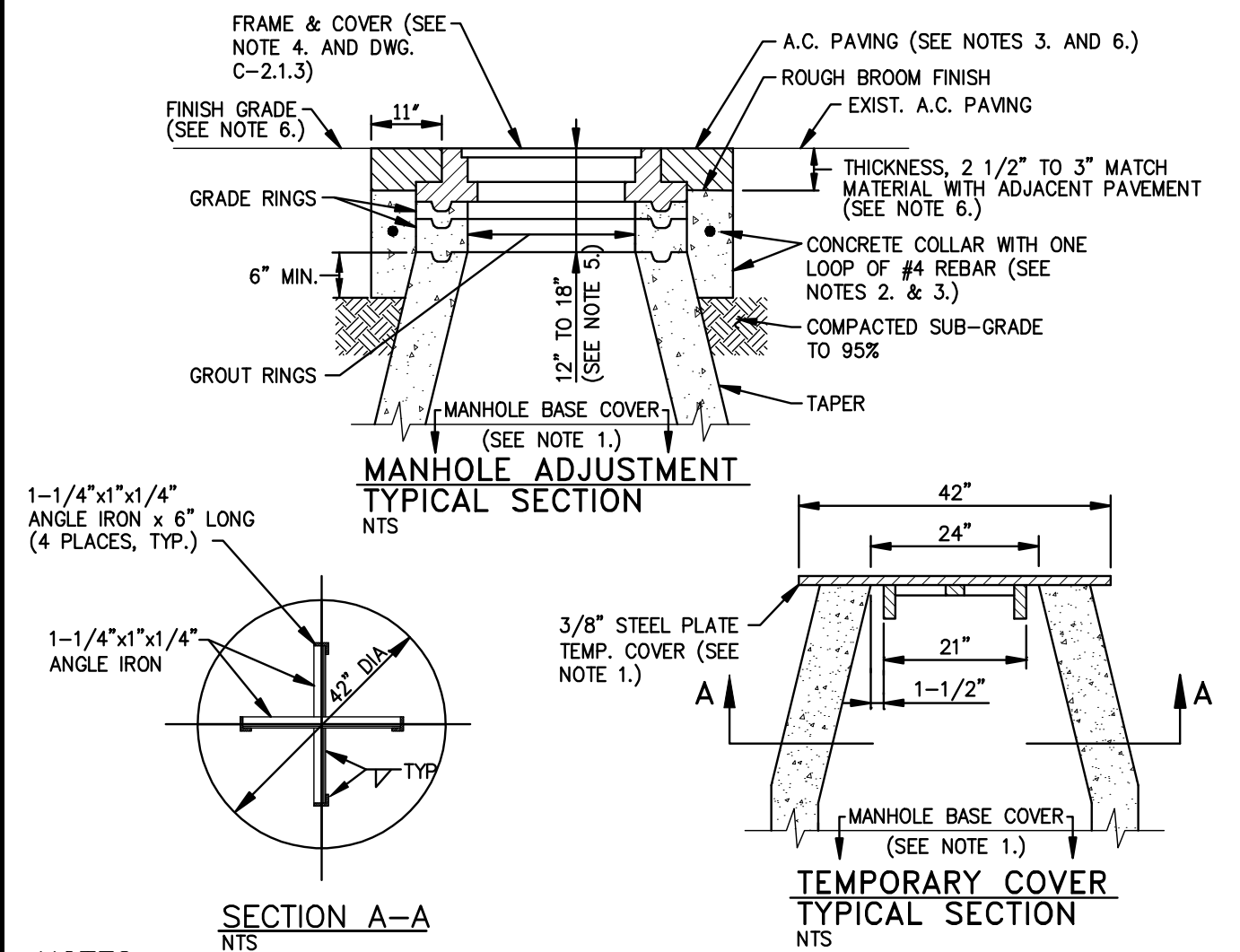
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COSTCO INTERIE & VISTA GRANDE WATERLINE
PROJECT No: 04.1000
STANDARD DETAILS

FOR BIDDING PURPOSES ONLY

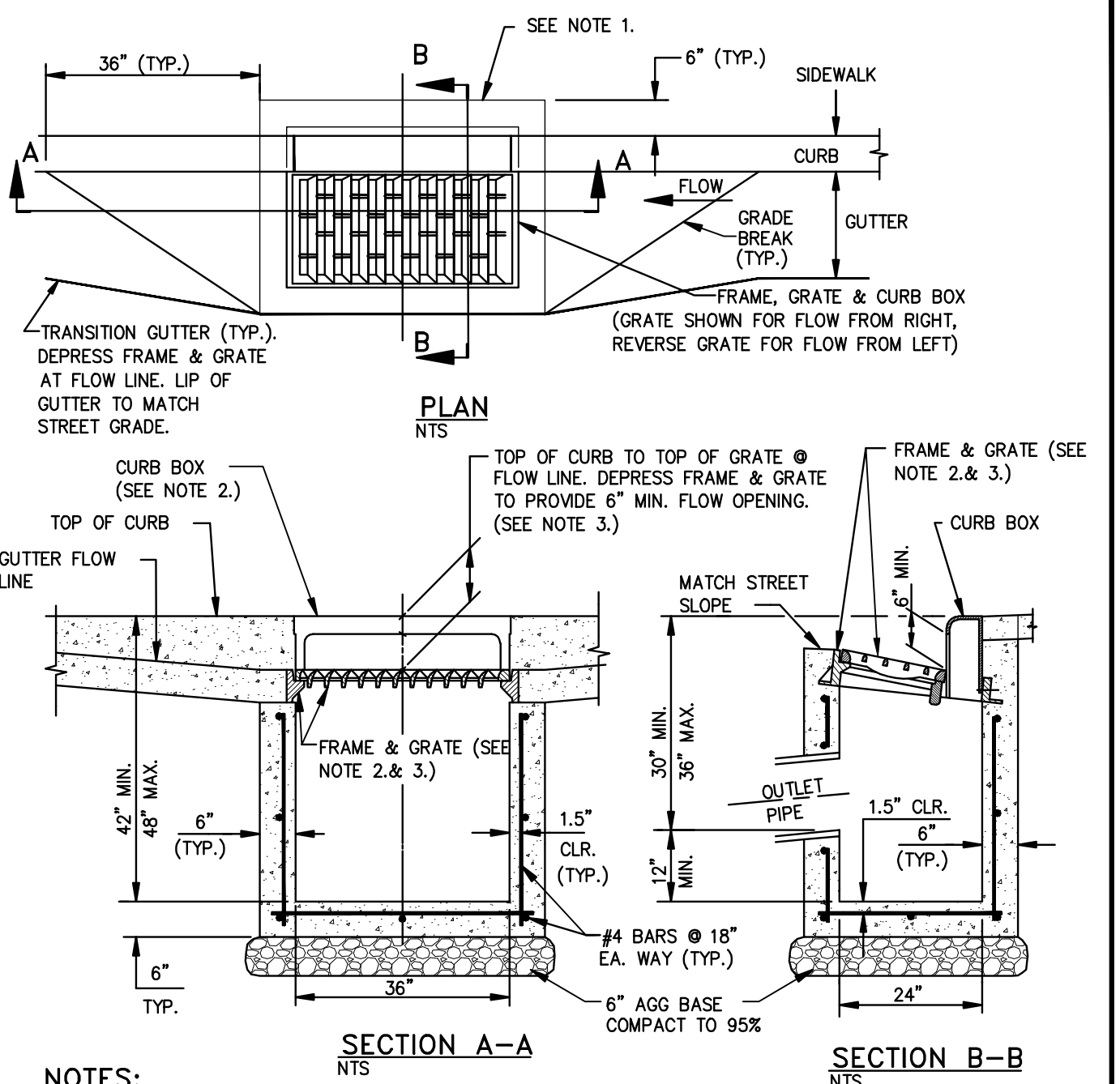
- MANHOLE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 204 "MANHOLES AND CATCH BASINS" OF THE SSPWC.
- MARKING TAPE SHALL BE INSTALLED 12 INCHES ABOVE ALL STORM DRAIN PIPE. TAPE WIDTH SHALL BE 3 INCHES; THICKNESS SHALL BE FOUR (4) MIL OR GREATER AND SHALL BE GREEN AND BEAR LARGE PRINTING DENOTING "CAUTION BURIED STORM DRAIN LINE BELOW" OR EQUIVALENT WORDING.
- PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH @ 28 DAYS, CURB AND GUTTER TRANSITION ONLY, ALL UNEXPOSED CONCRETE MAY BE 3000 PSI MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH A MAX. WATER/CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 202.
- REINFORCING STEEL SHALL BE GRADE 40 AND HAVE 1.5 INCHES MINIMUM CLEAR COVER.
- EACH CATCH BASIN SHALL HAVE A 4 INCH ALUMINUM BLUE DISK WITH FISH IMAGE AND THE WORDS "NO DUMPING/DRAINS TO RIVER" (ALMETEK SD-4 OR APPROVED EQUAL) INSTALLED ON THE TOP OF THE CURB BOX.
- FRAMES AND GRATES SHALL BE MATCHED TO ACHIEVE A CLOSE TOLERANCE FIT, WITH MINIMAL GAPS, AS APPROVED BY THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.
- STORM DRAINAGE IMPROVEMENTS SHALL INCORPORATE WATER QUALITY AND EROSION CONTROLS IN ACCORDANCE WITH THE NEVADA "HANDBOOK OF BEST MANAGEMENT PRACTICES".
- PRECAST MANHOLE SECTIONS, OTHER THAN GRADE RINGS, SHALL BE JOINED WITH FLEXIBLE PLASTIC GASKET MATERIAL SUCH AS RAM-NEK OR APPROVED EQUAL PER MANUFACTURERS RECOMMENDATIONS.
- TRACER WIRE SHALL BE ATTACHED TO ANY STORM DRAIN LATERAL WHICH IS NOT PERPENDICULAR TO THE STORM DRAIN MAIN.
- MANHOLES LOCATED OUTSIDE PAVED AREAS SHALL REQUIRE ALL WEATHER ACCESS ROADWAY CONSISTING OF 6 INCHES TYPE 2 CLASS B AGGREGATE BASE (CONFORMING TO THE SSPWC SECTION 200.01.02) AND STORM DRAIN MANHOLE MARKERS BE INSTALLED. STORM DRAIN MANHOLE MARKERS SHALL BE GREEN CARSONITE UTILITY MARKER (CUM 375), 5 FEET-2 INCHES (5'-2") WITH DECAL READING "STORM DRAIN MANHOLE". PLACE MARKERS ON EASEMENT LINE NEAREST TO MANHOLE OR AS DIRECTED BY THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.
- MANHOLE CONCRETE COLLARS SHALL BE LEFT 2 1/2 INCHES TO 3 INCHES BELOW FINISHED ASPHALT SURFACE. APPLY AN APPROVED TACK COAT (CONFORMING TO THE SSPWC SECTION 316) AND FILL VOID BETWEEN ADJACENT PAVEMENT AND FRAME WITH TYPE 3 AC 20 PAVING (CONFORMING TO THE SSPWC SECTION 320). APPLY FOG SEAL (CONFORMING TO SSPWC SECTION 317) TO THE ASPHALT SURFACE. ALL CUTS IN PAVING SHALL BE STRAIGHT AND EVEN. EXCEPTION: WHEN STRUCTURE NOT LOCATED IN ASPHALT PAVEMENT OR LOCATED IN AN UNPAVED AREA, EXTEND CONCRETE TO FINISH GRADE.
- GRATES SHALL BE PLACED OUTSIDE OF THE PEDESTRIAN TRAVELED WAY. GRATE OPENINGS SHALL NOT EXCEED 0.5 INCHES IN WIDTH OR 4 INCHES IN LENGTH. GRATES SHALL BE TRAFFIC RATED AND ADA COMPLIANT.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			STORM DRAIN GENERAL NOTES	
APPROVED BY:		7/09		SECTION CARSON CITY DRAWING NO. C-4.1.1 DATE 7/2009



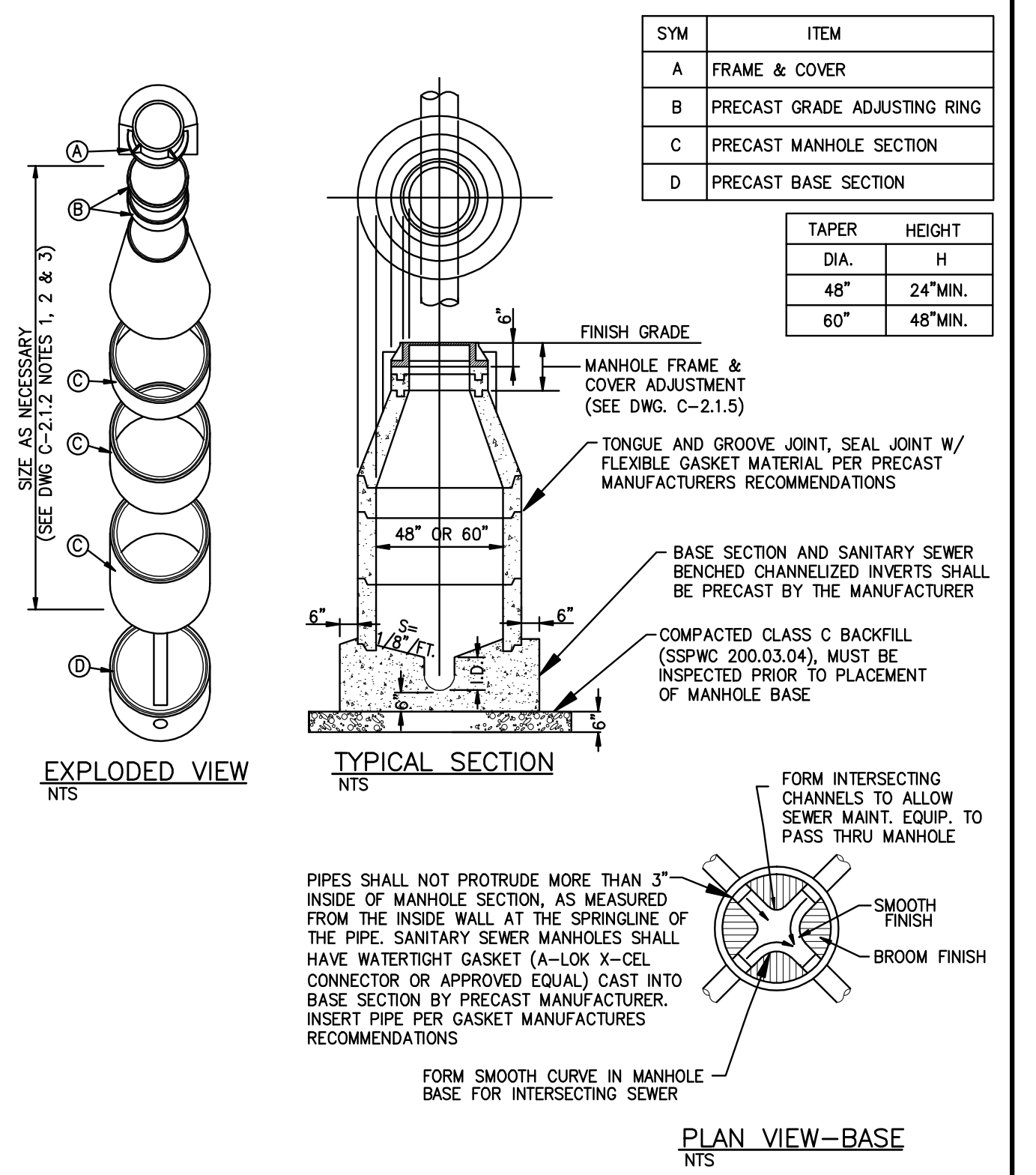
- NOTES:**
- INSTALL TEMPORARY COVER WITH CONE INSTALLATION WHEN INSTALLING NEW MANHOLE OR PRIOR TO REMOVING EXISTING FRAME & COVER AND GRADE RINGS TO ADJUST TO FINISH GRADE. INSTALL COVER OVER MANHOLE BASE TO PREVENT DEBRIS FROM ENTERING SEWER SYSTEM. THE MANHOLE BASE COVER SHALL BE IN PLACE PRIOR TO PERFORMING ANY ADJUSTMENTS OR GROUTING AND SHALL REMAIN IN PLACE WHILE ADJUSTMENTS OR GROUTING ARE BEING PERFORMED. REMOVE BASE COVER UPON ADJUSTMENT APPROVAL BY CARSON CITY.
 - CONCRETE SHALL CONFORM TO THE SSPWC SECTION 202.01.12. REBAR SHALL BE USED ONLY WHEN THE MANHOLE IS LOCATED OUTSIDE PAVED AREAS.
 - THE CONCRETE COLLAR SHALL BE LEFT 2 1/2 INCHES TO 3 INCHES BELOW FINISHED ASPHALT SURFACE. APPLY AN APPROVED TACK COAT (CONFORMING TO THE SSPWC SECTION 316) AND FILL VOID BETWEEN ADJACENT PAVEMENT AND FRAME WITH TYPE 3 AC 20 PAVING (CONFORMING TO THE SSPWC SECTION 320). APPLY FOG SEAL (CONFORMING TO SSPWC SECTION 317) TO THE ASPHALT SURFACE. ALL CUTS IN PAVING SHALL BE STRAIGHT AND EVEN. EXCEPTION: WHEN STRUCTURE NOT LOCATED IN ASPHALT PAVEMENT OR LOCATED IN AN UNPAVED AREA, EXTEND CONCRETE TO FINISH GRADE.
 - INSTALL NEW FRAME & COVER UNLESS OTHERWISE SHOWN ON THE PLANS OR SPECIAL CONDITIONS. FRAME & COVER SHALL BE SET FLUSH WITH FINISH GRADE UNLESS OTHERWISE NOTED.
 - FOR NEW MANHOLE INSTALLATIONS, DISTANCE FROM COVER TO CONE SHALL BE 12 INCHES MINIMUM AND 15 INCHES MAXIMUM FOR MINOR RESIDENTIAL STREETS AND 15 INCHES MINIMUM AND 18 INCHES MAXIMUM FOR ALL OTHER STREETS. FOR ADJUSTING EXISTING FRAME & COVERS THE DISTANCE FROM COVER TO CONE SHALL NOT EXCEED 18 INCHES.
 - WHEN LOCATED IN NDOT RIGHT-OF-WAY, CONCRETE COLLAR SHALL CONFORM TO NDOT STANDARD PLAN SHT R-4.7.3 AND STANDARD SPECIFICATION 609.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			MANHOLE FRAME & COVER ADJUSTMENT	
APPROVED BY:		7/09		SECTION CARSON CITY DRAWING NO. C-2.1.5 (204, 323) DATE 7/2009

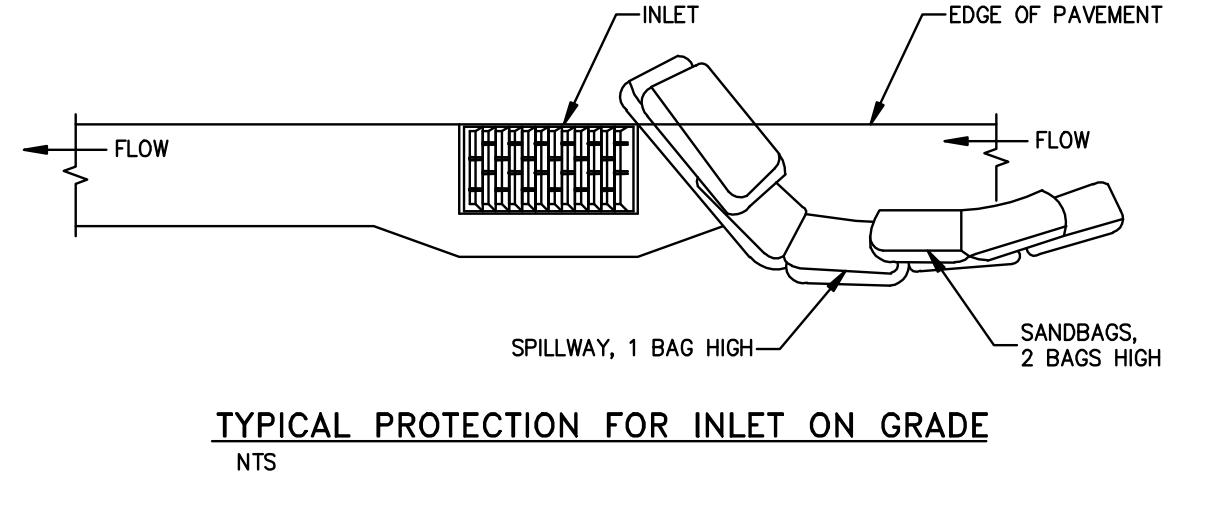
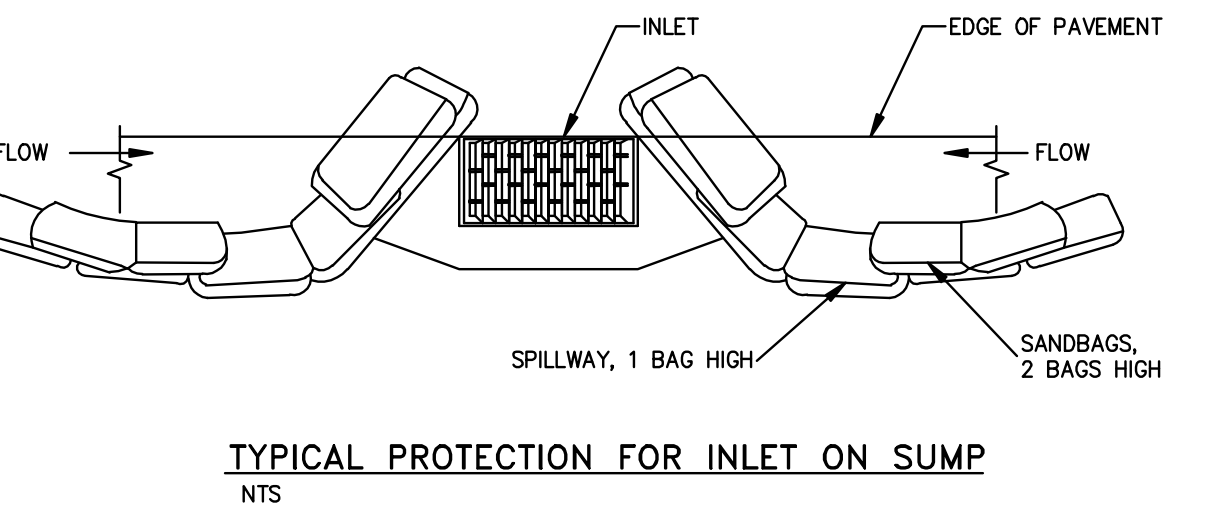


- NOTES:**
- IF NO SIDEWALK IS PRESENT, POUR 6 INCH CONCRETE CURB STRUCTURE BEHIND GRATE AND THE BEAM INTO BOX.
 - FRAME SHALL BE NEENAH R-3295 OR R-3067 SINGLE CURB UNIT WITH COMPLIANT TYPE L "VANE GRATE" AND CURB BOX, SOUTH BAY FOUNDRY VANE GRATE SOUTH BAY FOUNDRY 1947 OR APPROVED EQUAL, INSTALLED WITH PROPER FLOW DIRECTION.
 - TILT FRAME & GRATE AS REQUIRED TO ATTAIN 6 INCH MIN. FLOW OPENING & INSTALL DURABLE SHIMS BETWEEN THE CURB BOX & FRAME AS REQUIRED TO MATCH CURB BOX TO TOP OF CURB AND FACE OF CURB (SEE SECTION B-B).
 - CATCH BASIN TO BE INSTALLED OUTSIDE OF WALKING PATH. IF IT IS NOT POSSIBLE TO LOCATE CATCH BASIN OUTSIDE OF WALKING PATH THEN AN ADA COMPLIANT NEENAH MODEL DR/DL GRATE, SOUTH BAY FOUNDRY 1947-ADA OR APPROVED EQUAL SHALL BE USED UPON APPROVAL BY CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			CATCH BASIN TYPE 4-R	
APPROVED BY:		7/09		SECTION CARSON CITY DRAWING NO. C-4.1.5 DATE 7/2009

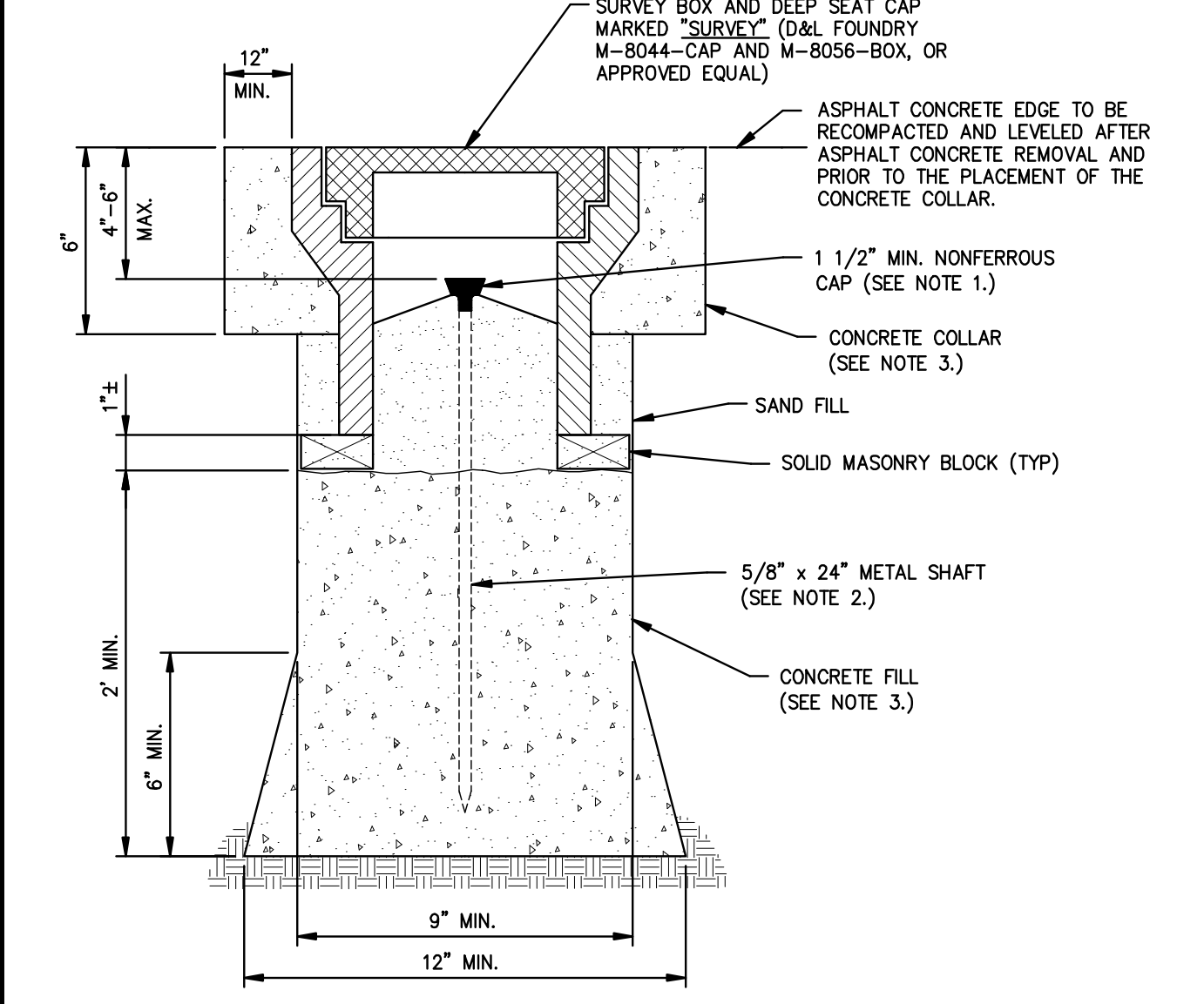


NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			MANHOLE TYPE 1	
APPROVED BY:		07/09		SECTION CARSON CITY DRAWING NO. C-2.1.3 (204, 306) DATE 7/2009



- NOTES:**
- INTENDED FOR TEMPORARY SHORT-TERM USE.
 - USE TO MANAGE CURB WATER FLOW.
 - SEDIMENT CAPTURED BEHIND SANDBAGS SHALL BE REMOVED WEEKLY DURING CONSTRUCTION.
 - INLET PROTECTION MUST BE PROPERLY MAINTAINED WHILE IN PLACE AND REMOVED WHEN REQUIREMENTS OF NDEP PERMIT HAVE BEEN MET.

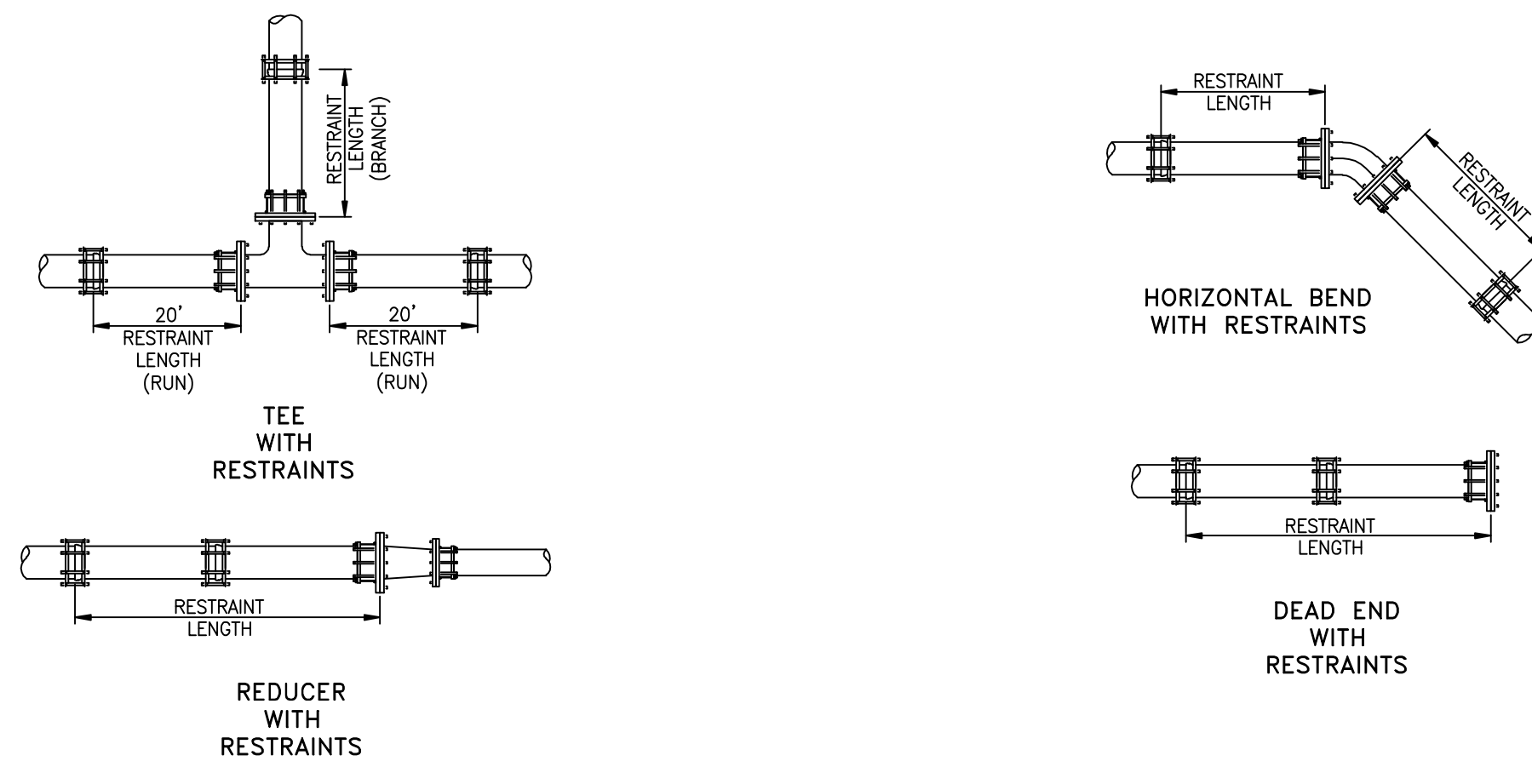
NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			STORM DRAIN INLET PROTECTION	
APPROVED BY:		7/09		SECTION CARSON CITY DRAWING NO. C-4.1.7 DATE 7/2009



- NOTES:**
- 1 1/2 INCH MIN. NONFERROUS CAP WITH PROFESSIONAL LAND SURVEYOR NO. PERMANENTLY ATTACHED PRIOR TO PLACEMENT.
 - 5/8 INCH METALLIC SHAFT (SMOOTH SHAFTS TO BE DEFORMED).
 - PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH A MAX. WATER/CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 202.
 - PRE-PUNCHED CAPS ARE NOT PERMITTED.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			CLASS "A" SURVEY MONUMENT	
APPROVED BY:		7/09		SECTION CARSON CITY DRAWING NO. C-5.5.3 DATE 7/2009

DIA.	TEE (BR/RUN)	HORIZONTAL BENDS				DEAD END/ VALVE	REDUCERS (RESTRAINT LENGTH IS ON LARGER PIPE # SIDE)			
		90°	45°	22.5°	11.25°		12" REDUCER	10" REDUCER	8" REDUCER	6" REDUCER
14"	1/20	29	12	6	3	90	23	43	58	71
12"	1/20	26	11	6	3	78	N/A	23	42	57



- RESTRAINT LENGTH CALCULATION ASSUMPTIONS:**
- SOIL TYPE = "SM"
 - SOIL COVER = 4"
 - RUN LENGTH = 20'
 - FACTOR OF SAFETY = 1.5
 - TRENCH = 90% COMPACTION (#5)
 - TEST PRESSURE = 150 PSI
- NOTES:**
- DEAD END AND VALVE HAVE THE SAME RESTRAINT LENGTH
 - RESTRAINING GLANDS SHALL BE FACTORY COATED DUCTILE IRON (ASTM A536-80), WITH 304 STAINLESS STEEL BOLTS, NUTS & WASHERS.
 - RESTRAINT LENGTH CORRESPONDS TO LENGTH OF RESTRAINED JOINTS REQUIRED ON EACH SIDE OF BEND, VALVE, OR FITTING.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			PVC RESTRAINT LENGTH CALCULATION DETAIL	
APPROVED BY:				

PROJ. MGR.: _____
 PROJ. ASSOC.: _____
 CHECKED BY: _____
 DWG NO.: CCCC15
 SCALE (HORIZ): _____
 SCALE (VERT): _____
 PLOT DATE: JAN 2014

CARSON CITY PUBLIC WORKS DEPARTMENT
 3505 BUTTE WAY CARSON CITY, NEVADA 89701
 PH: 887-2555
 FAX: 887-2112

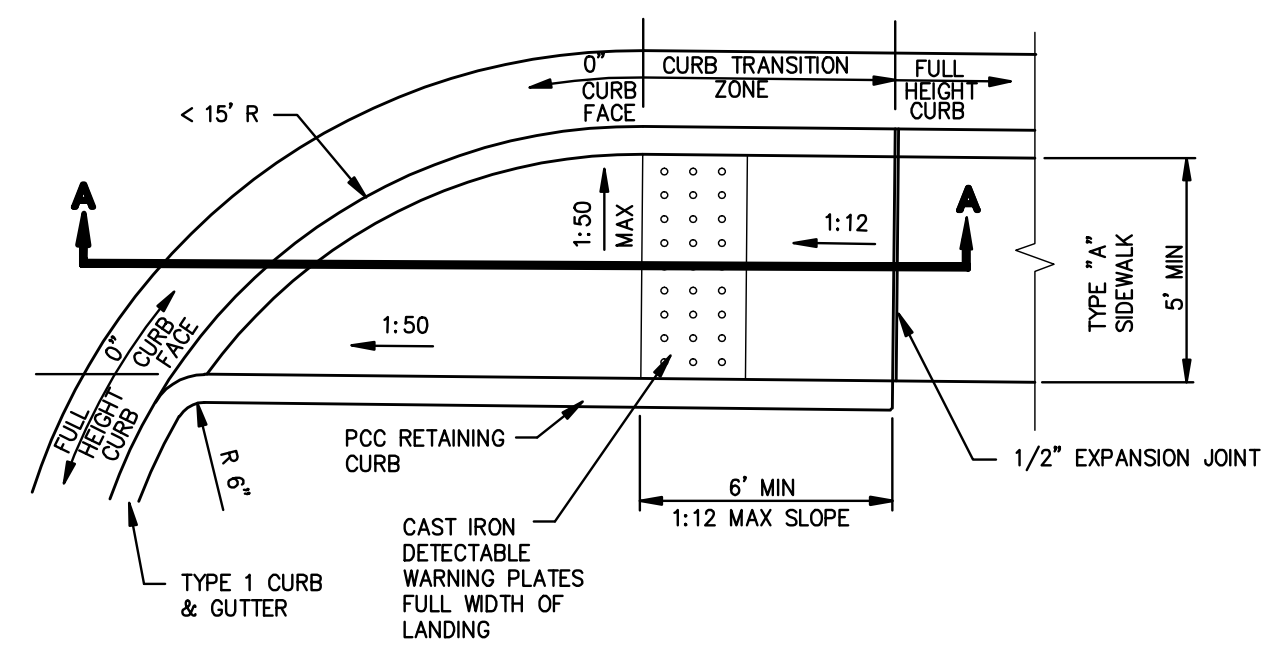
Manhard CONSULTING LTD.
 8476 Paradise Parkway, Suite 12
 Reno, NV 89502
 PH: (775) 882-5680

REBECCA C. BERNIER
 Exp: 12/31/14
 CIVIL ENGINEER
 No. 19279

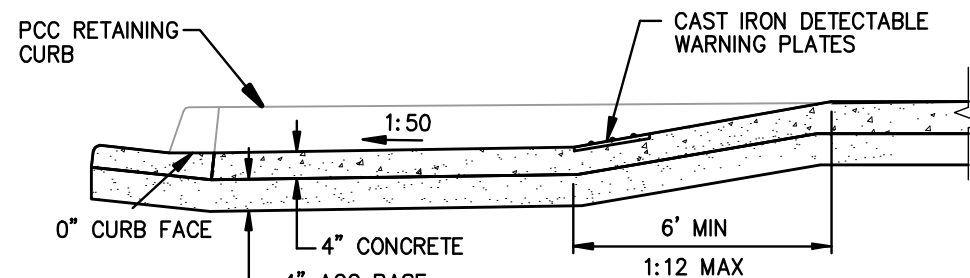
COSTCO INTERTIE & VISTA GRANDE WATERLINE
 PROJECT No: 04.1000
 STANDARD DETAILS

SHEET 24 OF 28

FOR BIDDING PURPOSES ONLY



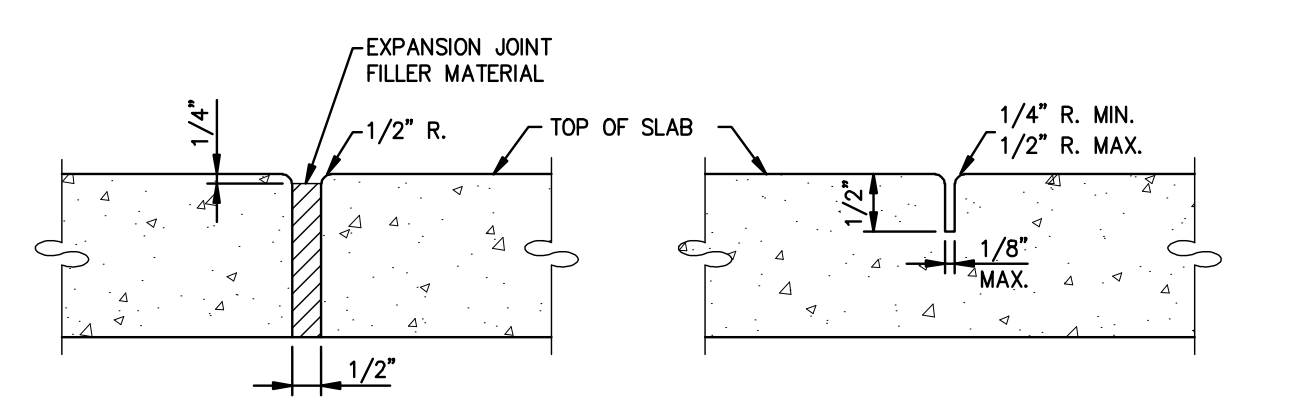
PLAN
NTS



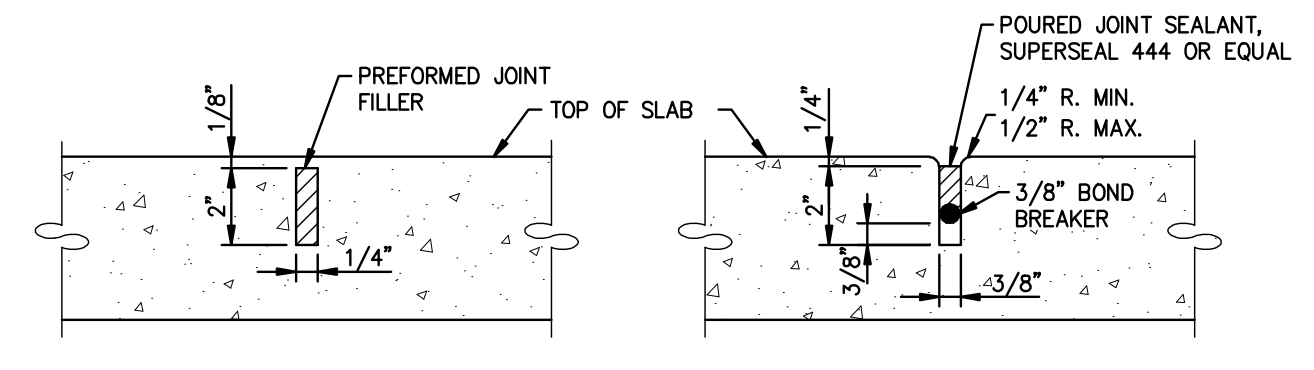
SECTION A-A
NTS

- NOTES:**
1. LINEAR SINGLE TRANSITION CURB RAMP TO BE USED ONLY AT RETURNS HAVING LESS THAN A 15 FOOT RADIUS.
 2. NOT FOR USE WITH OFFSET SIDEWALKS.
 3. RETAINING CURBS ARE TO BE USED IN ALL CASES AND EXISTING GRADE AT BACK OF SIDEWALK IS TO BE RAISED TO TOP OF RETAINING CURB ELEVATION.
 4. SEE "CURB RAMP GENERAL NOTES" DWG C-5.3.1 FOR FURTHER REQUIREMENTS.

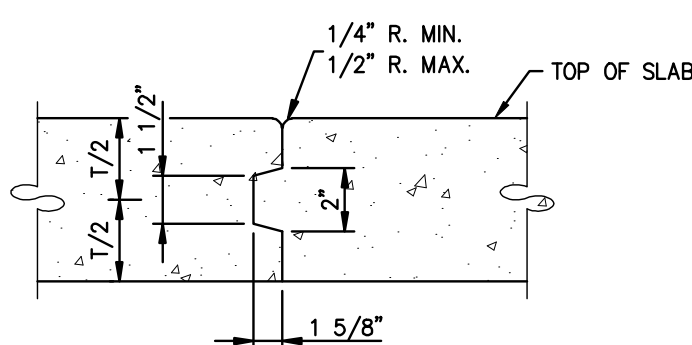
NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			LINEAR CURB RAMP SINGLE ADJACENT	DRAWING NO. C-5.3.8 DATE 7/2009



EXPANSION/ISOLATION JOINT



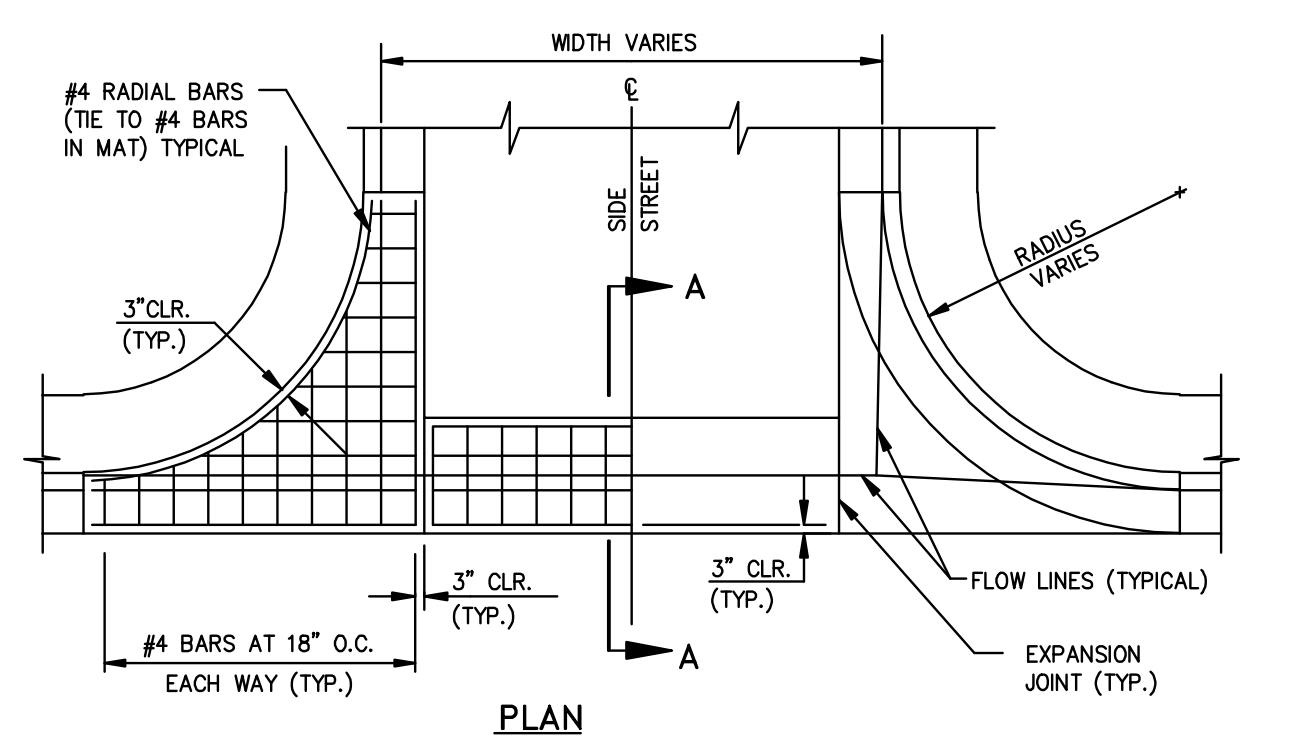
WEAKENED PLANE JOINT P.C.C. PAVEMENT



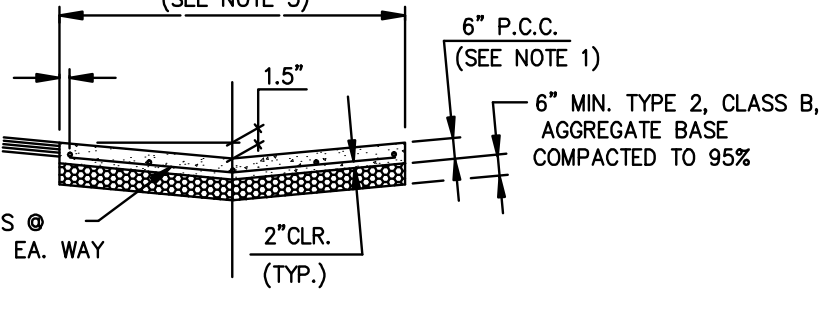
KEYED JOINT

- NOTES:**
1. ALL CONCRETE EDGING AND JOINTING SHALL CONFORM TO SECTION 312.09 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC).

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			P.C.C. JOINTING DETAILS	DRAWING NO. C-5.1.1 (312) DATE 7/2009



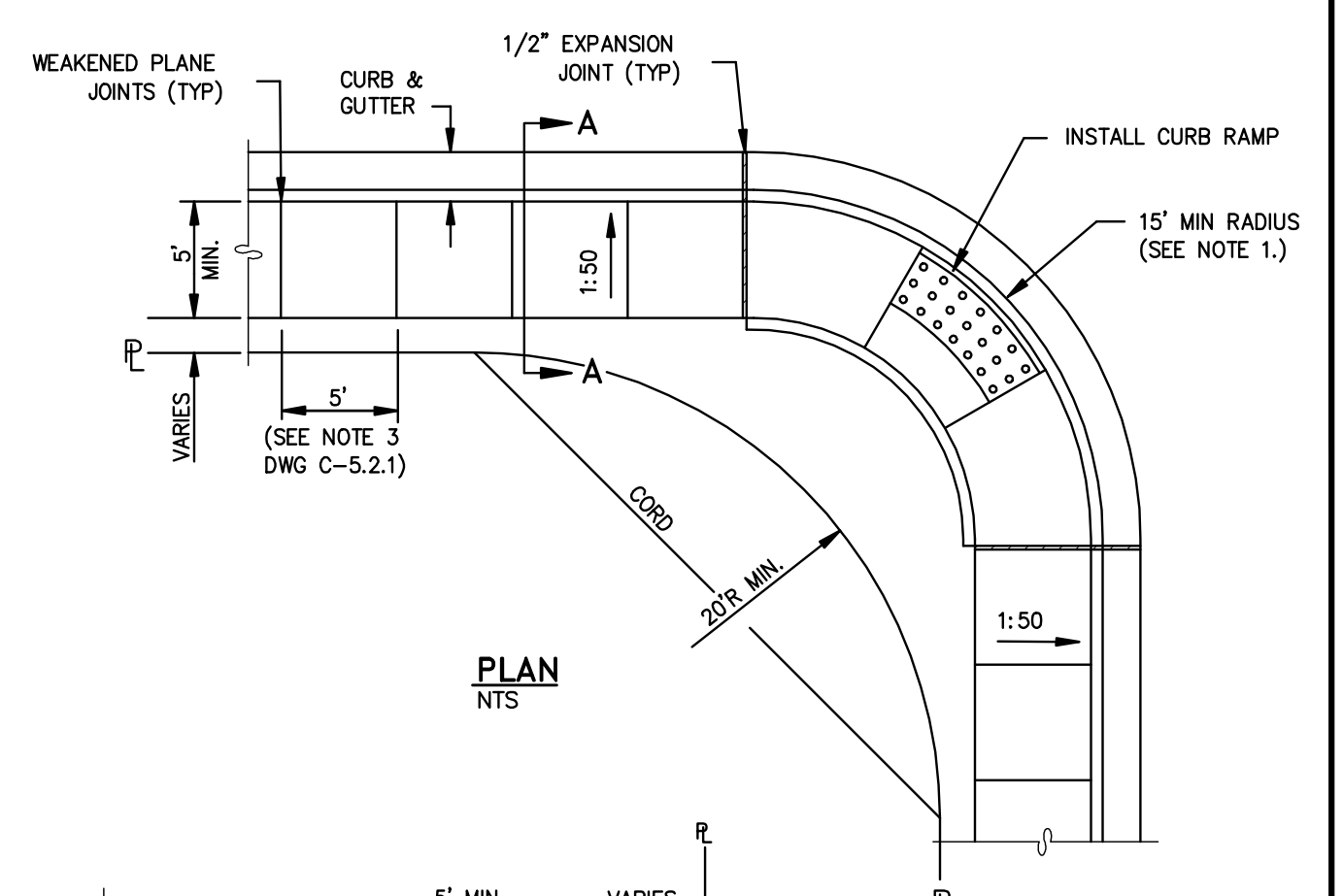
PLAN
NTS



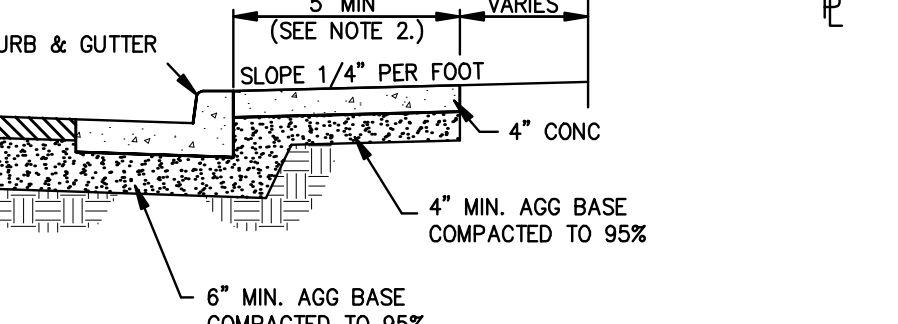
SECTION A-A

- NOTES:**
1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: SYNTHETIC FIBER-REINFORCEMENT (AT A MINIMUM OF 1 POUND PER CUBIC YARD), 4000 PSI MIN. COMPRESSIVE STRENGTH @ 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH A MAX. WATER/CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 202. POLYPROPYLENE FIBERS SHALL BE ADDED TO THE P.C.C. PER THE MANUFACTURER'S RECOMMENDATIONS.
 2. FOR INDUSTRIAL AREAS, AN ENGINEERED DESIGN IS REQUIRED.
 3. AGGREGATE BASE SHALL BE ENGINEERED TYPE 2, CLASS B WITH 95% COMPACTION.
 4. VALLEY GUTTER SHALL HAVE WEAKENED PLANE JOINTS EVERY 10 FEET.
 5. LOCAL AND COLLECTOR STREETS, WIDTH = 6 FEET. ARTERIAL STREETS (DRIVEWAYS ONLY), WIDTH = 10 FEET.
 6. VALLEY GUTTER SECTIONS (SPANDRELS) ALONG CURB & GUTTER SHALL BE A MONOLITHIC POUR AS SHOWN.
 7. ALL CONCRETE EDGING AND JOINTING SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD DETAIL C-5.1.1 AND CONFORM TO SECTION 312.09 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC).

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			P.C.C. VALLEY GUTTER	DRAWING NO. C-5.1.2 DATE 7/2009



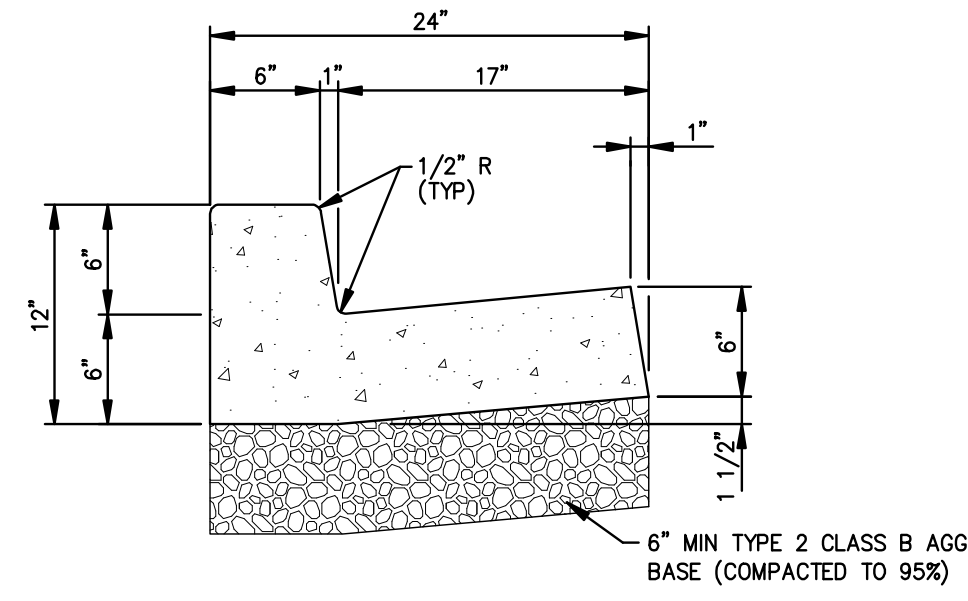
PLAN
NTS



SECTION A-A
NTS

- NOTES:**
1. MINIMUM CURB RETURN RADIUS SHALL BE 15 FEET UNLESS OTHERWISE APPROVED BY THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.
 2. SOME STREETS MAY REQUIRE WIDER SIDEWALKS.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			TYPE "A" SIDEWALK	DRAWING NO. C-5.2.2 DATE 7/2009



PCC CURB & GUTTER
TYPE 1

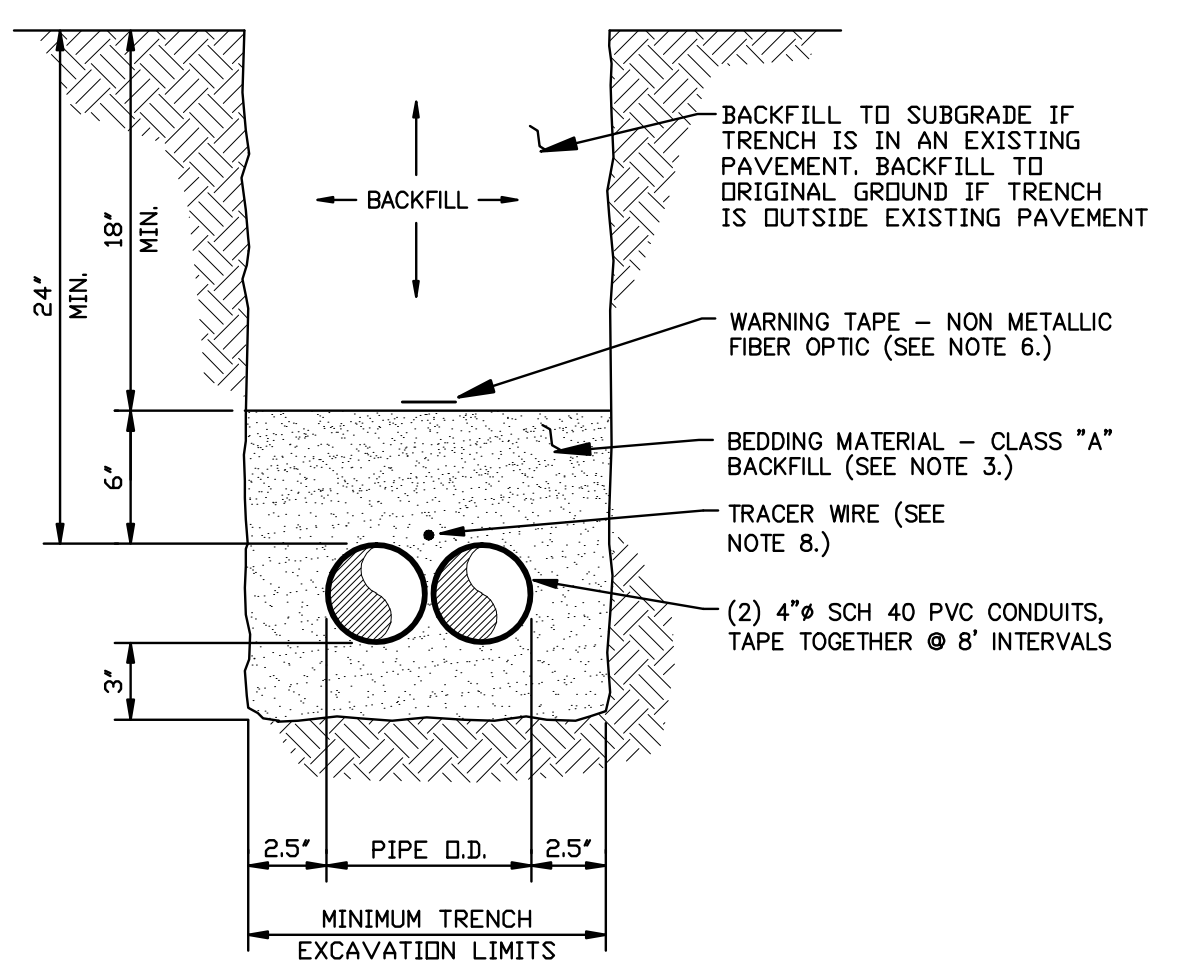
- NOTES:**
1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: SYNTHETIC FIBER-REINFORCEMENT (AT A MINIMUM OF 1 POUND PER CUBIC YARD), 4000 PSI MIN. COMPRESSIVE STRENGTH @ 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH A MAX. WATER/CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. ALL MATERIALS SHALL CONFORM TO SECTION 202 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
 2. ALL CONCRETE CURB & GUTTER SHALL HAVE 1/2 INCH EXPANSION JOINTS EVERY 30 FEET (UNLESS APPROVED OTHERWISE BY THE ENGINEER) AND AT ALL CURB RETURNS AND SHALL HAVE WEAKENED PLANE JOINTS EVERY 10 FEET. CONCRETE EDGING AND JOINTING SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD DETAIL C-5.1.1 AND CONFORM TO SECTION 312.09 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC).
 3. ALL AGGREGATE BASE SHALL BE TYPE 2, CLASS B AND CONFORM TO SECTION 200.01 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, AND SHALL BE MECHANICALLY COMPACTED TO 95% COMPACTION, IN CONFORMANCE WITH SECTION 308.05 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
 4. CURBS SHALL BE MARKED WITH A 2 INCH "S" ON THE TOP OF CURB AT SEWER LATERAL LOCATIONS.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			PCC CURB & GUTTER TYPE 1	DRAWING NO. C-5.1.3 DATE 7/2009

1. NO CONCRETE SHALL BE PLACED UNTIL FORMS AND SUBGRADE ARE INSPECTED AND APPROVED BY CARSON CITY PUBLIC WORKS.
2. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: SYNTHETIC FIBER-REINFORCEMENT (AT A MINIMUM OF 1 POUND PER CUBIC YARD), WITH COARSE AGGREGATE GRADATION CONFORMING TO SIZE NO. 67 PER SECTION 200.05.03 OF THE STANDARD SPECIFICATIONS, AND SHALL HAVE A 1 TO 4 INCH SLUMP, AND 4 TO 7 PERCENT ENTRAINMENT AIR. 4000 PSI MIN. COMPRESSIVE STRENGTH @ 28 DAYS, MIN. 6 SACKS OF TYPE II CEMENT PER CUBIC YARD WITH A MAX. WATER/CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 202 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. ALL CONCRETE EDGING AND JOINTING SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. DETAIL C-5.1.1 AND CONFORM TO SEC. 312.09 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC).
4. IF OBSTRUCTIONS SUCH AS INLETS, UTILITY POLES, FIRE HYDRANTS, ETC. ARE ENCOUNTERED, THE LOCATION AND DIMENSIONS MAY BE ADJUSTED UPON APPROVAL BY CARSON CITY PUBLIC WORKS. A MINIMUM SURFACE OF 5 FEET X 5 FEET CLEAR IS REQUIRED WHEN DIRECTION OF TRAVEL MAY CHANGE AND A MINIMUM SURFACE OF 4 FEET CLEAR IS REQUIRED WHERE DIRECTION OF TRAVEL IS NOT EXPECTED TO CHANGE, UNLESS OTHERWISE APPROVED BY THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.
5. EXISTING CONCRETE SHALL BE REMOVED TO A NEAT SAWCUT LINE OR NEAREST EXPANSION JOINT.
6. ALL AGGREGATE BASE SHALL BE TYPE 2, CLASS B AND SHALL CONFORM TO SEC.200.01 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC).
7. NEW CONCRETE SHALL HAVE A HEAVY BROOM FINISH PERPENDICULAR TO SIDEWALK.

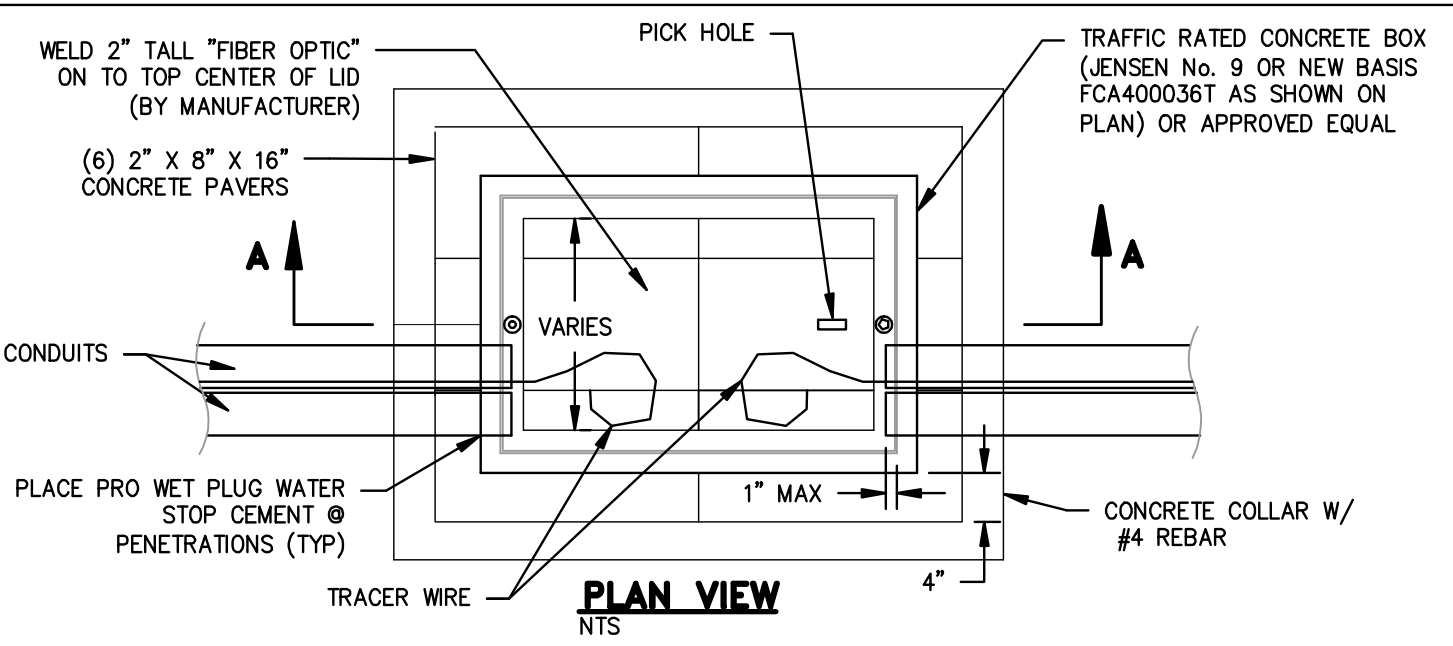
SIDEWALK AND DRIVEWAY
GENERAL NOTES

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			SIDEWALK AND DRIVEWAY GENERAL NOTES	DRAWING NO. C-5.2.1 DATE 7/2009

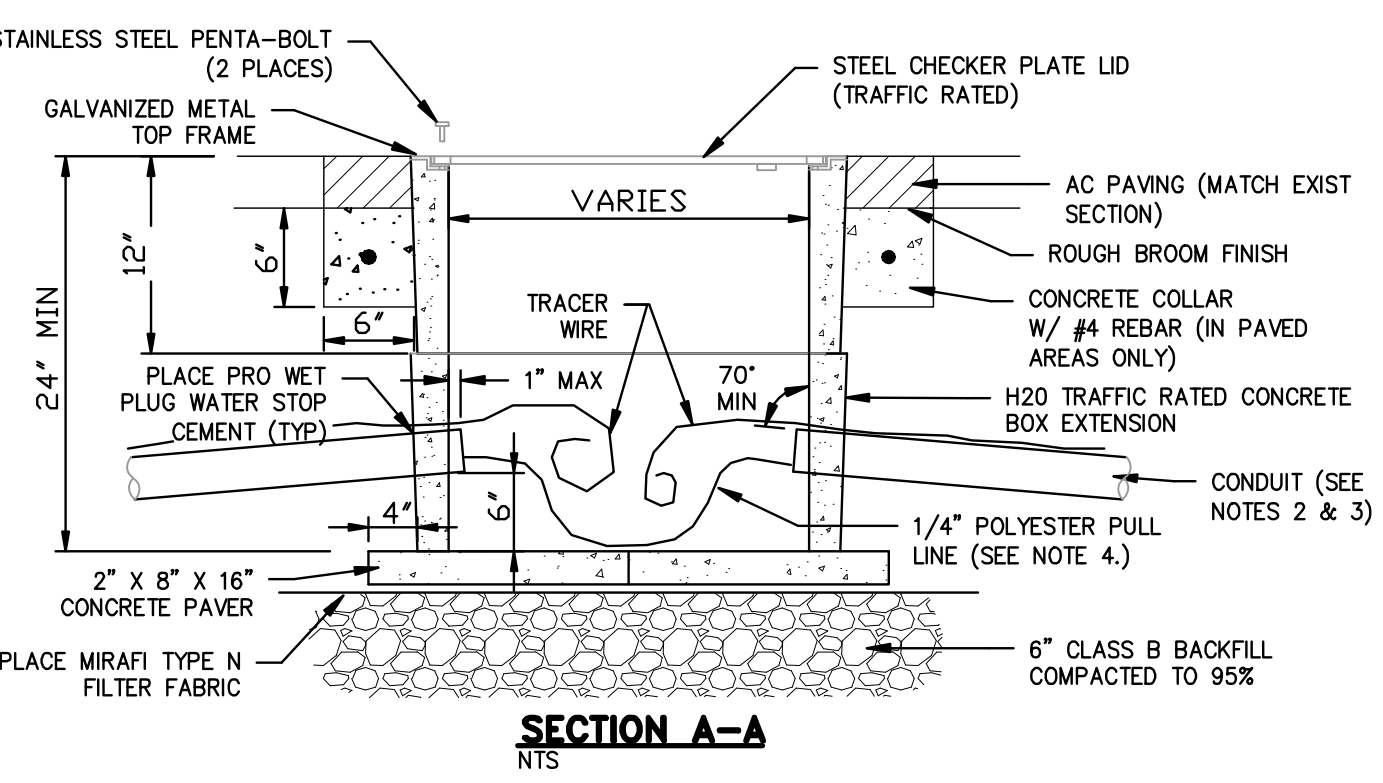


FIBER OPTIC TRENCH
SECTION

- NOTES:**
1. WATER DENSIFIED BACKFILL AND TUNNELING SHALL BE BY SPECIAL PROVISION ONLY.
 2. BACKFILL SHALL CONFORM TO THE REQUIREMENTS OF CLASS E BACKFILL AS SPECIFIED IN SUBSECTION 200.03.06 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC). MATERIAL SHALL BE PLACED IN LIFT THICKNESS SPECIFIED IN SUBSECTION 305.10 OF THE SSPWC AND DENSIFIED TO 90% RELATIVE COMPACTION.
 3. BEDDING SHALL CONFORM TO THE REQUIREMENTS OF CLASS A BACKFILL AS SPECIFIED IN SUBSECTION 200.03.02 OF THE SSPWC. MATERIAL SHALL BE DENSIFIED TO 90% RELATIVE COMPACTION.
 4. FOR TRENCHES IN ROADWAY SECTION, SEE PAVEMENT PATCH (PERMANENT) STANDARD DRAWING C-5.1.6.
 5. FOR THE PURPOSE OF PAYMENT, EXCAVATION AND BACKFILL QUANTITIES ARE BASED ON THESE STANDARD DRAWINGS, AND NO ADDITIONAL COMPENSATION WILL BE MADE. SHERING OR SLOPED CUT SLOPES MAY BE NECESSARY, BUT THERE WILL BE NO ADDITIONAL PAYMENT. ALL EXCAVATIONS SHALL CONFORM TO THE LATEST D.S.H.A. REQUIREMENTS.
 6. PLACE NON METALLIC WARNING TAPE 1 FOOT ABOVE ALL BURIED PIPES AND CONDUITS.
 7. TRACER WIRE SHALL BE 12 GAUGE (MINIMUM THICKNESS) INSULATED SOLID COPPER OR COPPER-CLAD STEEL CORE WIRE. INSULATION SHALL BE 30 MIL HIPE. PLANS SHALL SPECIFY WIRE STRENGTH AND INSULATION THICKNESS FOR BORING APPLICATIONS. SPLICES SHALL BE CONNECTED BY WIRE NUTS, SEALED WITH AQUA SEAL OR SILICON FILLED, AND DOUBLE WRAPPED WITH U/L LISTED ELECTRICAL TAPE. TRACER WIRE COLOR SHALL BE, BLUE FOR WATER, PURPLE FOR RECLAIMED WATER, GREEN FOR SEWER, AND YELLOW FOR ELECTRICAL/FIBER OPTIC.



PLAN VIEW
NTS

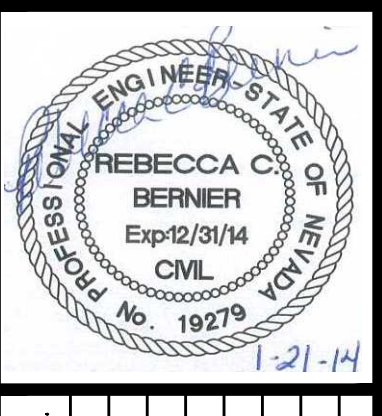


SECTION A-A
NTS

- NOTES:**
1. FIBER OPTIC PULL BOXES AND COVERS SHALL BE H-20 TRAFFIC RATED, WITH BOLT DOWN STEEL COVER LID MARKED "FIBER OPTIC".
 2. CONDUIT SHALL BE SCHEDULE 40 PVC ELECTRICAL CONDUIT. ALL CONDUITS ENTERING A PULLBOX SHALL BE CAPPED WITH AN END BELL.
 3. CONDUIT RUNS SHALL NOT USE SWEEPS INTO THE PULL BOX UNLESS OTHERWISE NOTED. CONDUIT PENETRATIONS SHALL ENTER BOX AT NO MORE THAN 20 DEGREES FROM PERPENDICULAR. CONDUIT SHALL BE RAISED FROM TRENCH DEPTH TO BOX WITHOUT SWEEPS. CONDUIT SHALL REACH TRENCH DEPTH WITHIN 10' OUTSIDE OF BOX MAX.
 4. CONDUITS SHALL HAVE 1/4" POLYESTER PULL LINE WITH SEQUENTIAL FOOTAGE MARKINGS AND A MINIMUM BREAKING STRENGTH OF 400 POUNDS. PULL LINE SHALL EXTEND A MINIMUM OF 3 FEET FROM EACH HANDHOLE.

RCB
PROJ. MGR.:
PROJ. ASSOC.:
CHECKED BY:
DWG NO.:
SCALE (HORIZ):
SCALE (VERT):
PLOT DATE:

CARSON CITY
PUBLIC WORKS DEPARTMENT
3505 BUTTE WAY
CARSON CITY, NEVADA 89701
PH: 887-2355
FAX: 887-2112
C-5.2.2

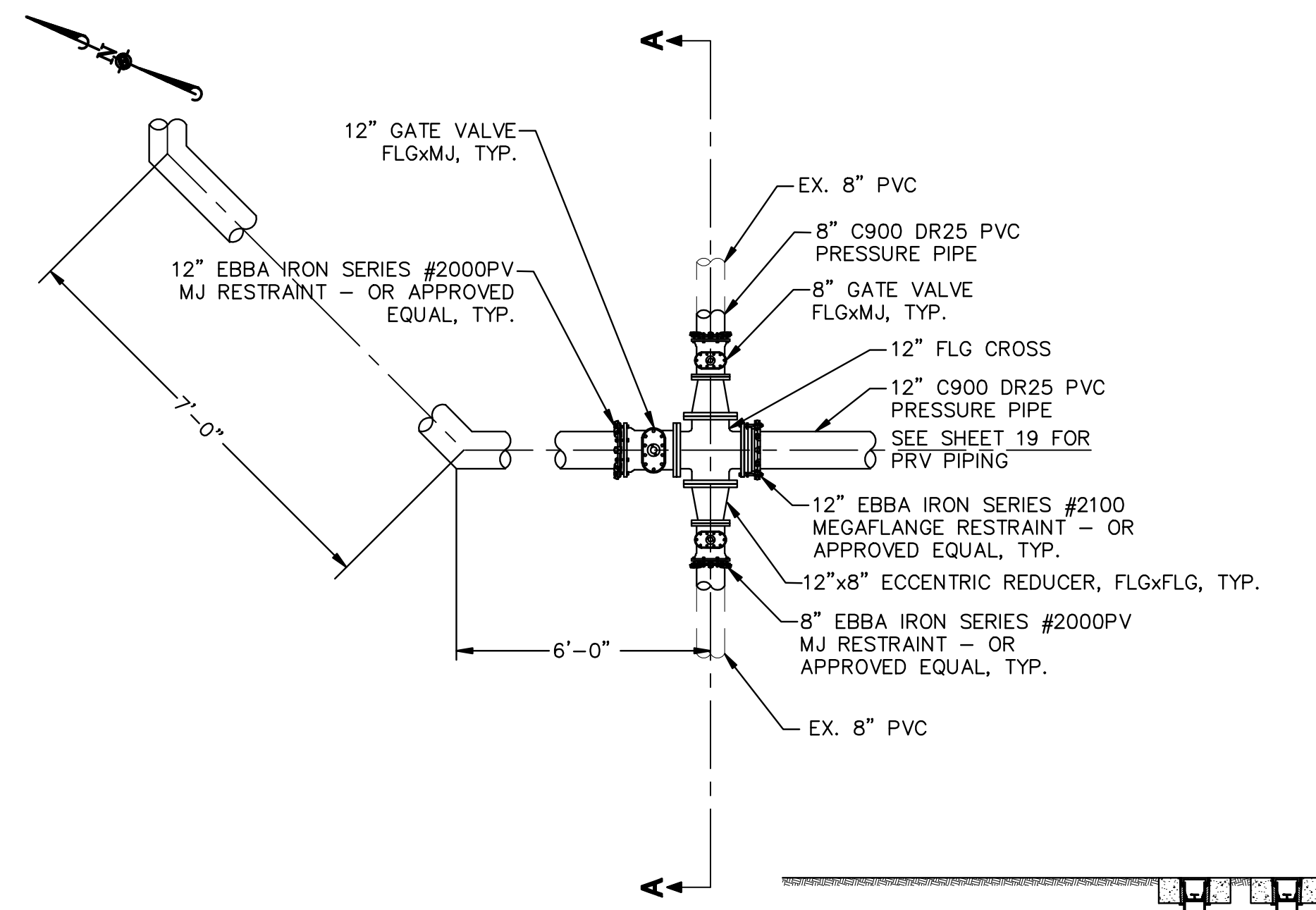


NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			TYPE "A" SIDEWALK	DRAWING NO. C-5.2.2 DATE 7/2009

COSTCO INTERTIE & VISTA GRANDE WATERLINE
PROJECT No: 04.1000
STANDARD DETAILS

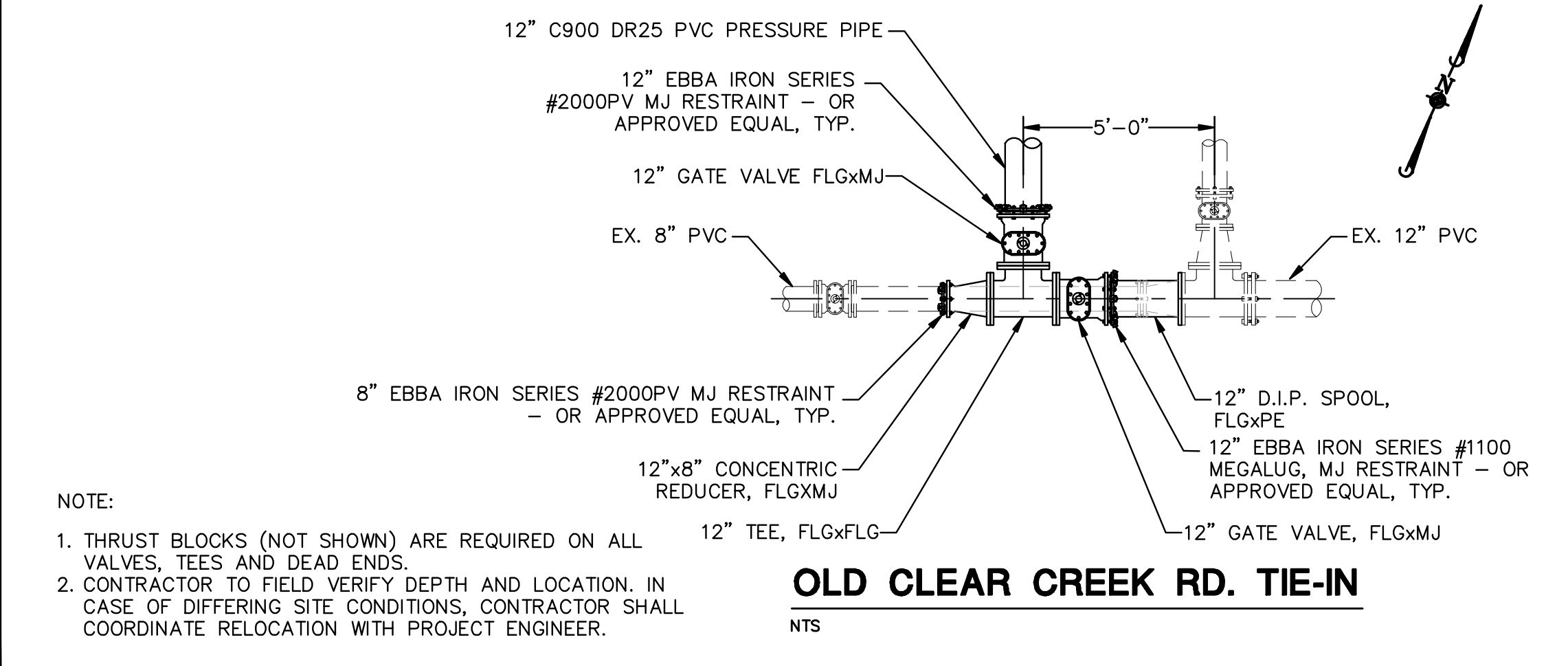
SHEET
25
OF
28

FOR BIDDING PURPOSES ONLY



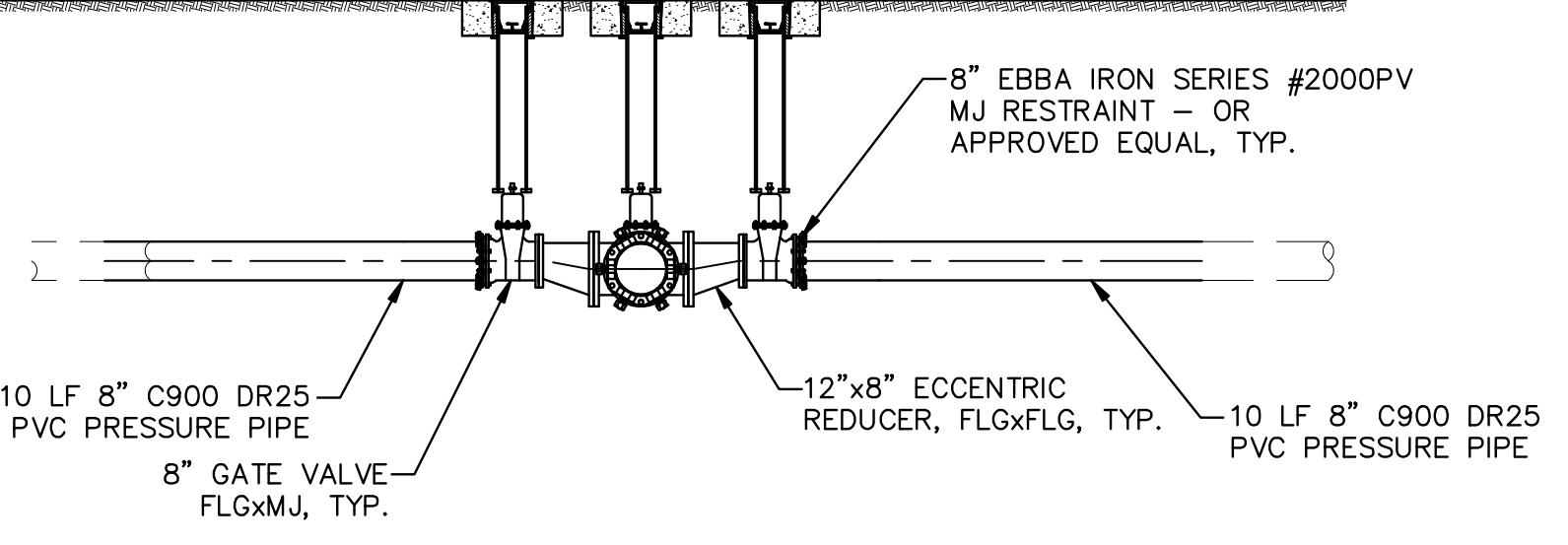
12" WATERLINE TIE-IN
NTS

- NOTE:
- THRUST BLOCKS (NOT SHOWN) ARE REQUIRED ON ALL VALVES, TEES AND DEAD ENDS.
 - CONTRACTOR TO FIELD VERIFY DEPTH AND LOCATION. IN CASE OF DIFFERING SITE CONDITIONS, CONTRACTOR SHALL COORDINATE RELOCATION WITH PROJECT ENGINEER.

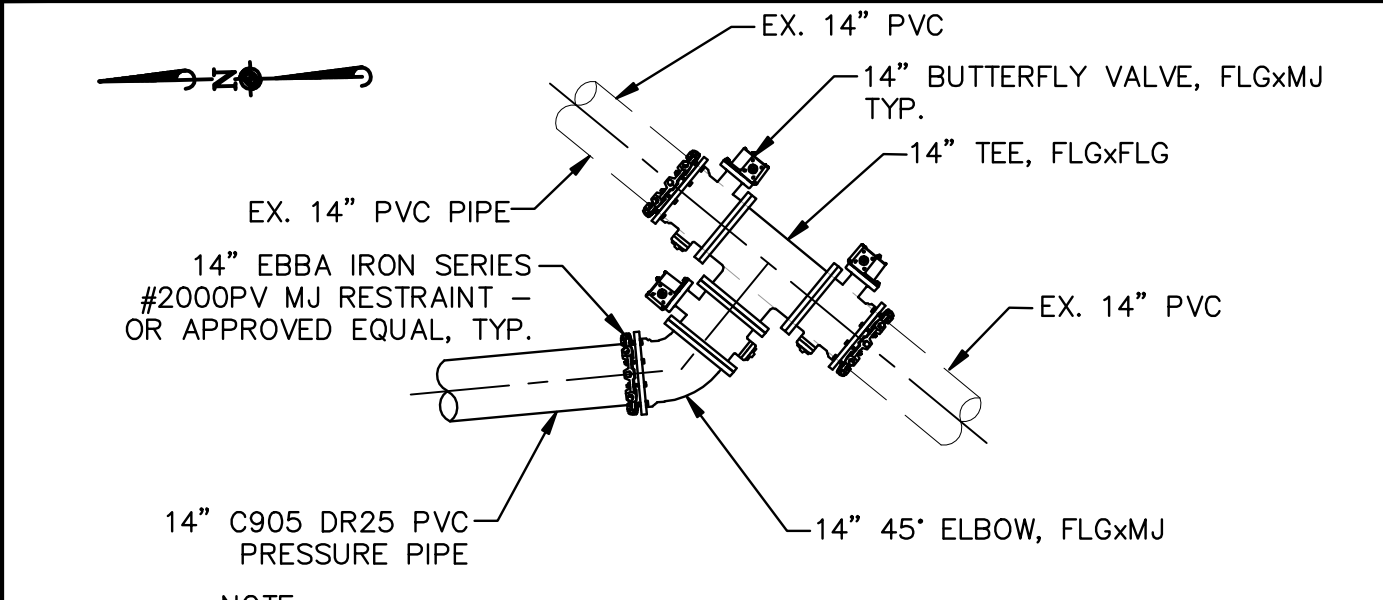


OLD CLEAR CREEK RD. TIE-IN
NTS

- NOTE:
- THRUST BLOCKS (NOT SHOWN) ARE REQUIRED ON ALL VALVES, TEES AND DEAD ENDS.
 - CONTRACTOR TO FIELD VERIFY DEPTH AND LOCATION. IN CASE OF DIFFERING SITE CONDITIONS, CONTRACTOR SHALL COORDINATE RELOCATION WITH PROJECT ENGINEER.

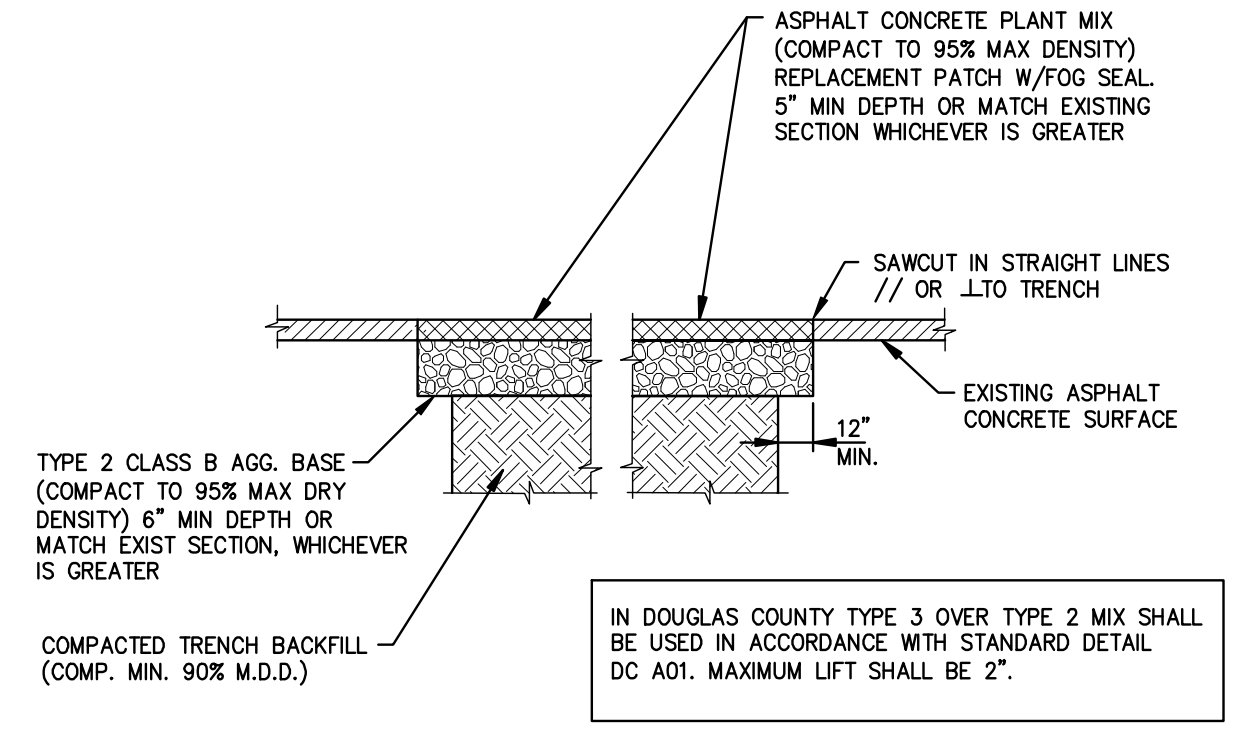


SECTION A-A



VISTA GRANDE BLVD. TIE-IN
NTS

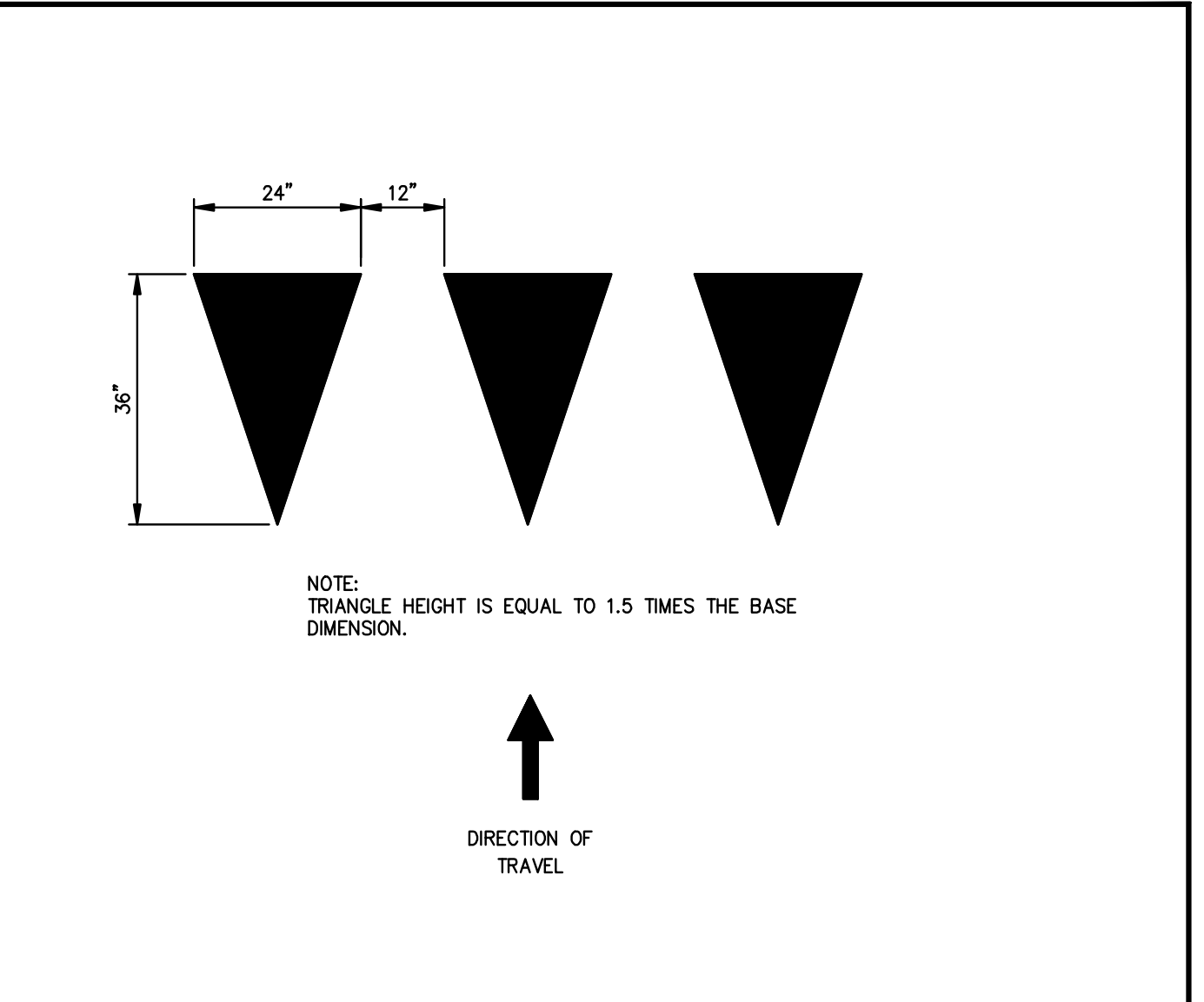
- NOTE:
- THRUST BLOCKS (NOT SHOWN) ARE REQUIRED ON ALL VALVES, TEES AND DEAD ENDS.
 - CONTRACTOR TO FIELD VERIFY DEPTH AND LOCATION. IN CASE OF DIFFERING SITE CONDITIONS, CONTRACTOR SHALL COORDINATE RELOCATION WITH PROJECT ENGINEER.



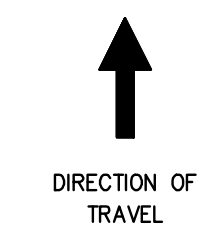
NOTES:

- IF SAWCUT IS WITHIN 24 INCHES OF EDGE OF A.C. PAVEMENT REMOVE EXISTING PAVEMENT TO THAT EDGE AND REPLACE ENTIRE SECTION.
- BITUMINOUS MATERIAL SHALL MEET THE REQUIREMENTS OF SECTIONS 201 AND 320 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- MIXING, SPREADING, AND COMPACTING OF BITUMINOUS PAVEMENT SHALL BE DONE ONLY WHEN THE SURFACE ON WHICH THE MATERIALS ARE TO BE PLACED IS DRY AND WHEN THE ATMOSPHERIC TEMPERATURE IS ABOVE 50 DEGREES FAHRENHEIT AND HAS NOT BEEN BELOW 40 DEGREES FAHRENHEIT DURING THE PRECEDING 24 HOURS.
- FINISHED SURFACE VARIATIONS SHALL BE 0 TO 0.25 INCHES ABOVE EXISTING SURFACE. ALL HUMPS EXCEEDING THIS TOLERANCE SHALL BE CORRECTED BY REMOVAL OF MATERIAL AND REPLACING IT WITH NEW MATERIAL. EXISTING SURFACE OF PATCH SHALL NOT BE BELOW EXISTING ADJACENT SURFACE.
- PLANTMIX BITUMINOUS PAVEMENT COURSE SHALL BE PG-64-22 TYPE 3 AND SUB SURFACE COURSES SHALL BE PG-64-22 TYPE 3 UNLESS OTHERWISE NOTED.
- PLANTMIX BITUMINOUS PAVEMENT PATCHES SHALL MATCH EXISTING SECTION OR HAVE A MINIMUM THICKNESS OF 5 INCHES, WHICHEVER IS GREATER.
- PLANS SHALL SPECIFY PAVEMENT PATCH AND AGGREGATE BASE DEPTHS AS SPECIFIED BY THE DESIGN ENGINEER.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
				CARSON CITY
				DRAWING NO. C-5.1.6
				DATE 7/2009



NOTE: TRIANGLE HEIGHT IS EQUAL TO 1.5 TIMES THE BASE DIMENSION.

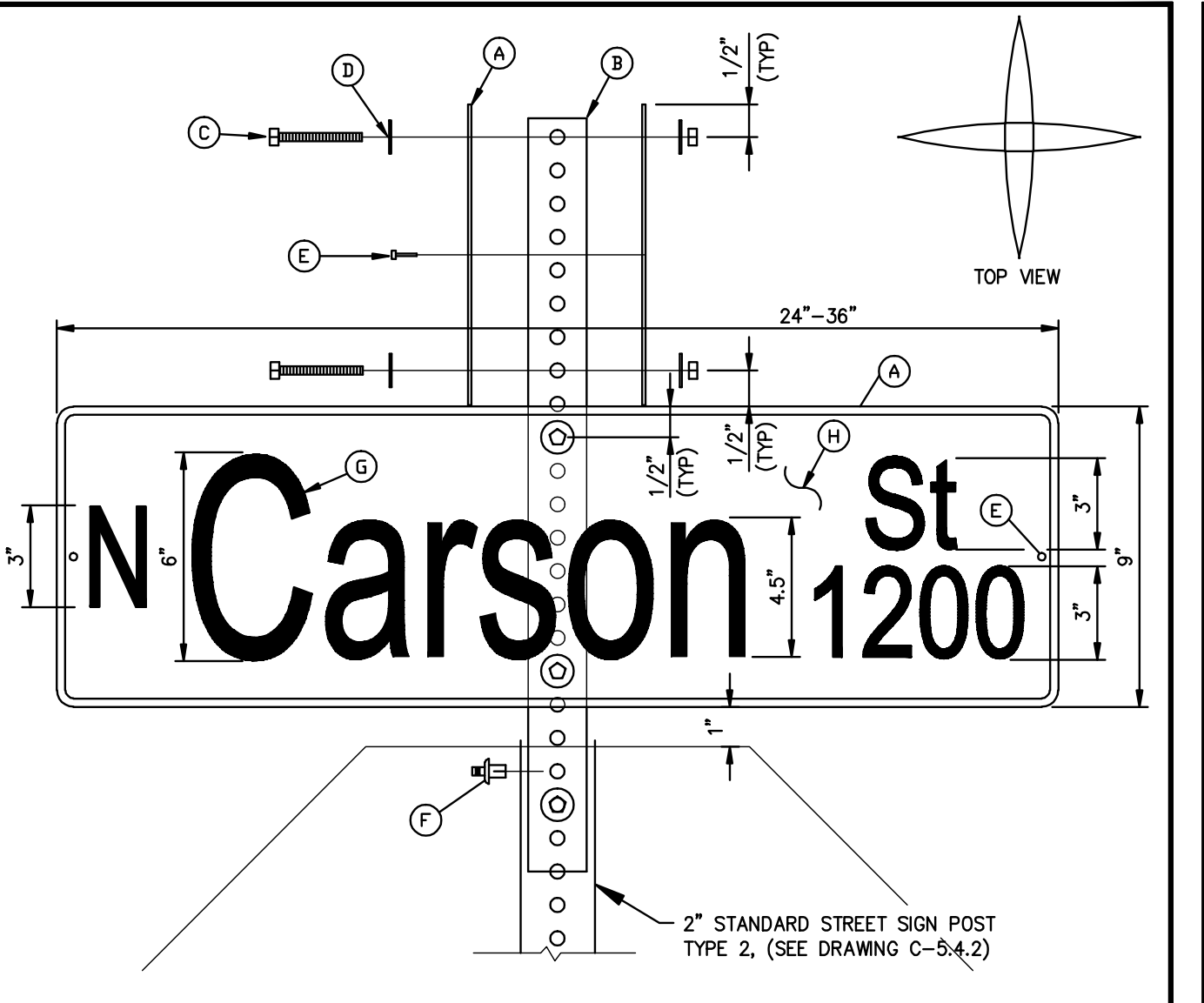


NOTES:

- ALL STRIPING SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS, CURRENT EDITION.
- ALL PAINTED STRIPING AND PAVEMENT LEGENDS SHALL CONFORM TO CARSON CITY PUBLIC WORKS SPECIFICATIONS.
- ALL INLAY TAPE STRIPING AND/OR PAVEMENT LEGENDS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
- YIELD LINE TO BE INSTALLED FROM EDGE OF LANE TO EDGE OF PAVEMENT OR LIP OF CURB.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
				CARSON CITY
				DRAWING NO. C-5.4.4
				DATE 7/2009

YIELD LINE LAYOUT

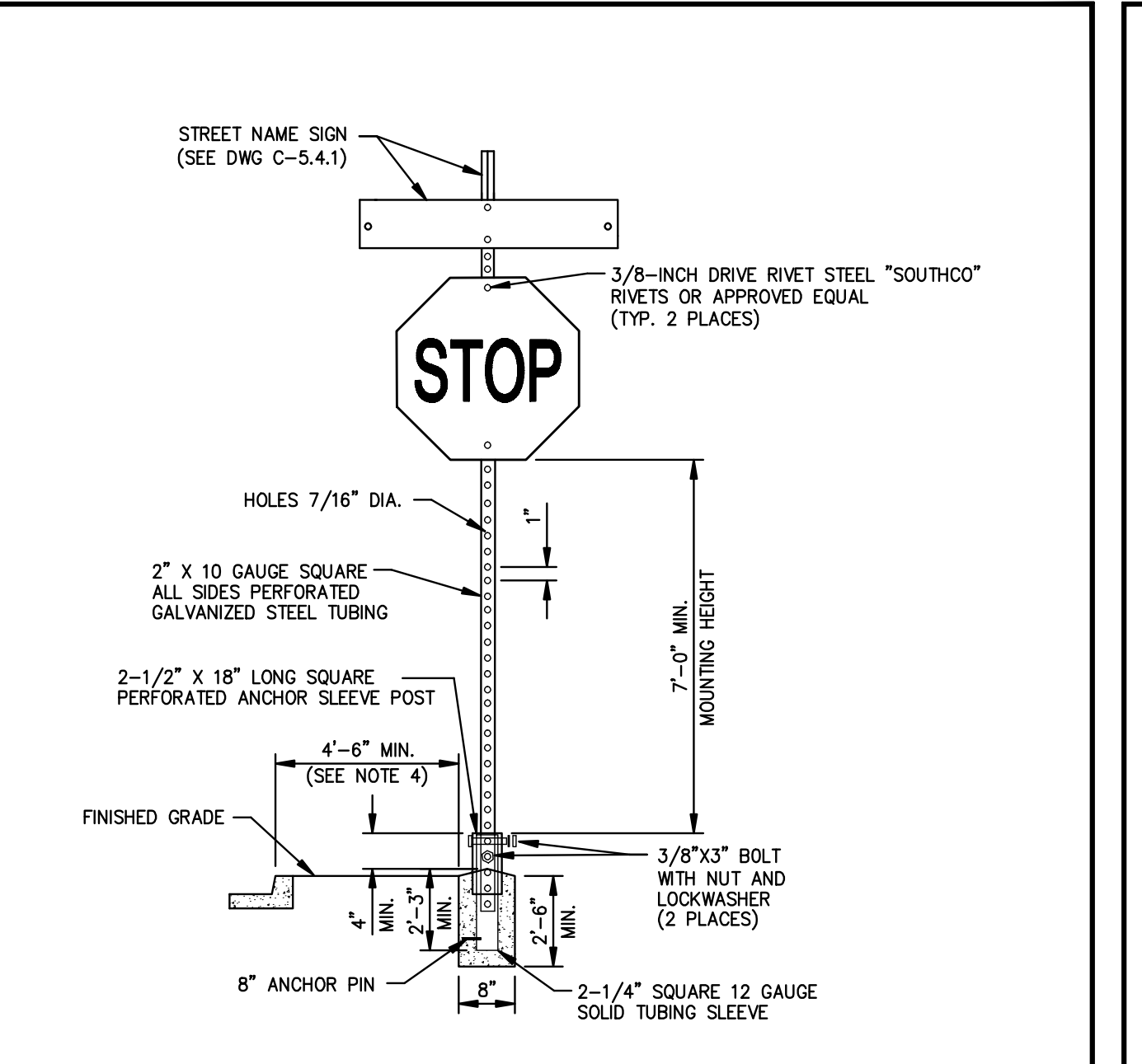


NOTES:

- STREET NAME SIGN SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE M.U.T.C.D.
- LETTERING FONT SHALL BE "HIGHWAY EM".
- SUBMITTAL REQUIRED TO CITY FOR LONGER NAMES OR DROP LETTERS.
- MATERIALS SHALL CONSIST OF:
 - A. (4) FLAT PLATE ALUMINUM NO. 6061-T6, .080 GAUGE.
 - B. (1) 2-FOOT LONG 1 3/4-INCH "TELESPAR" OR EQUIVALENT
 - C. (4) 2 1/2-INCH LONG, 5/16-INCH SAE GRADE 5 BOLT & NUT
 - D. (8) FLAT WASHERS
 - E. (4) 1/8-INCH DIAMETER, STEEL POP RIVET (MEDIUM LENGTH) WITH 1/8-INCH WASHER (ALUMINUM OR STEEL)
 - F. (1) 3/8-INCH DRIVE RIVET STEEL "SOUTHCO"
 - G. WHITE SHEETING - RETROREFLECTIVE ASTM IX DIAMOND GRADE YIP "3M" OR EQUIVALENT
 - H. GREEN SHEETING - TRANSPARENCY ELETRO OUT FILM 1177C "3M" OR EQUIVALENT

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
				CARSON CITY
				DRAWING NO. C-5.4.1
				DATE 7/2009

STREET NAME SIGN AND MOUNTING

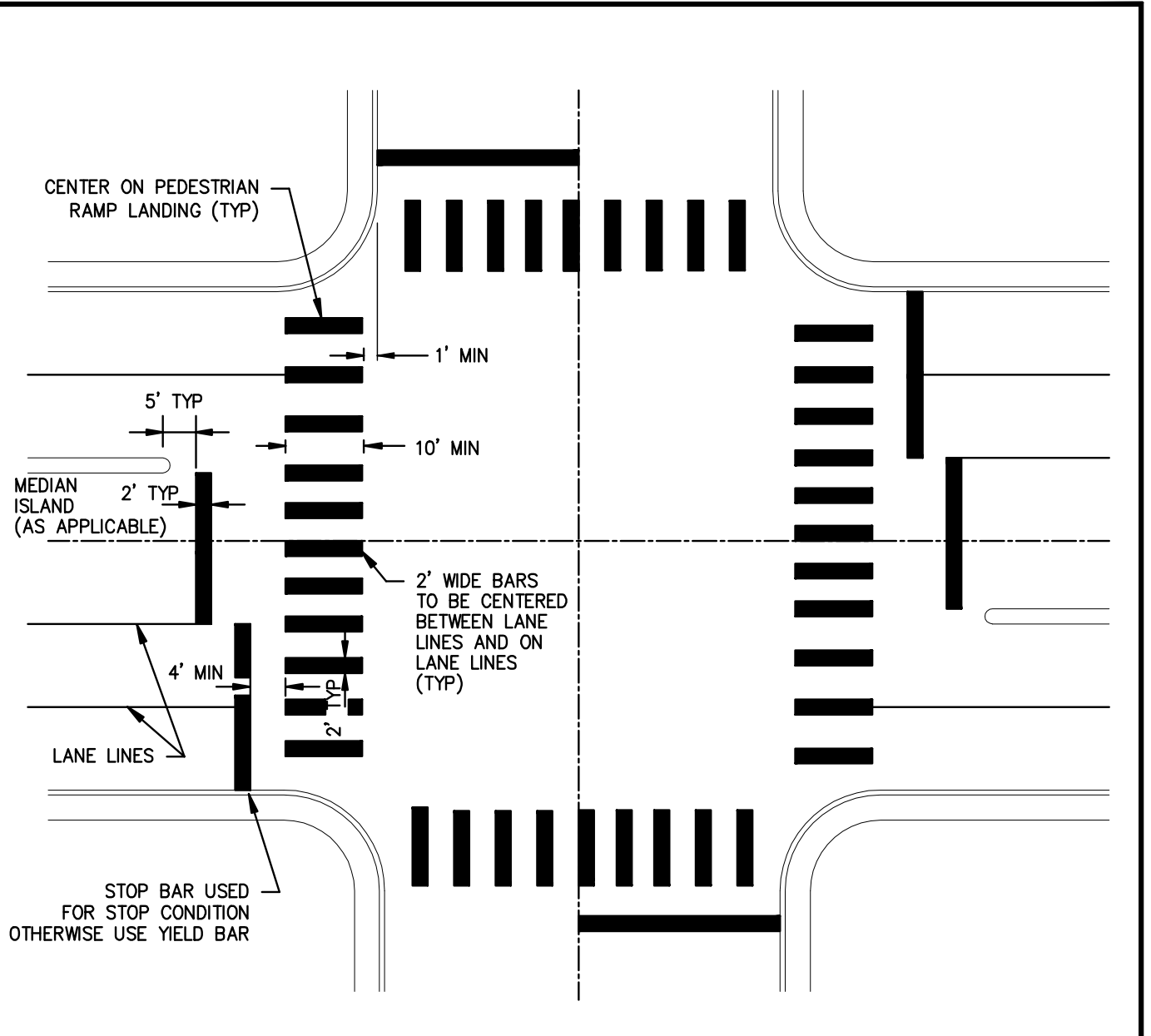


NOTES:

- SIGN MATERIALS, CONSTRUCTION AND PLACEMENT SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- STREET NAME SIGN SHALL BE AS SPECIFIED IN STANDARD DETAIL DRAWING NO. C-5.4.1
- ON STREETS WHERE CURBING DOES NOT EXIST, SET SIGN 6 FEET MINIMUM FROM PAVEMENT EDGE.
- CONCRETE BASE SHALL BE LOCATED AT BACK OF SIDEWALK, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
- ALL REGULATORY SIGNS SHALL USE ASTM TYPE 3 OR 4 INTENSITY SHEETING.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
				CARSON CITY
				DRAWING NO. C-5.4.2
				DATE 7/2009

TRAFFIC SIGN INSTALLATION



TYPICAL CROSSWALK STRIPING DETAIL

NOTES:

- ALL STRIPING SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS, CURRENT EDITION.
- INLAY TAPE STRIPING AND/OR PAVEMENT LEGENDS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
- CROSSWALK MARKINGS SHALL BE INSTALLED AT ALL TRAFFIC SIGNAL LOCATIONS AND AT OTHER LOCATIONS AS DIRECTED BY THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.

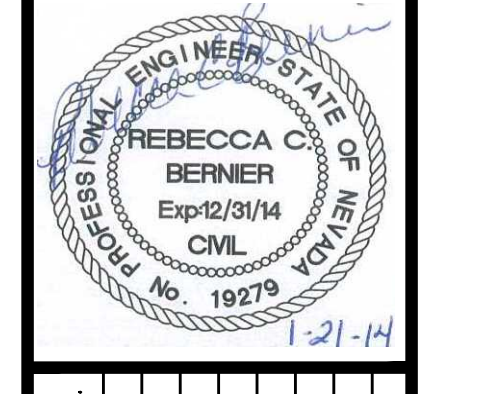
NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
				CARSON CITY
				DRAWING NO. C-5.4.3
				DATE 7/2009

CROSSWALK LEGEND

RCB
PROJ. MGR.:
PROJ. ASSOC.:
CHECKED BY:
DWG NO.:
SCALE (HORIZ):
SCALE (VERT):
PLOT DATE:

CARSON CITY DEPARTMENT
PUBLIC WORKS
3505 BUTTE WAY CARSON CITY, NEVADA 89704
PH: 887-2355 FAX: 887-2112

Manhard CONSULTING LTD.
3476 Prater Road, Suite 12 Carson City, NV 89706
PH: (775) 882-5660 FAX: (775) 882-7282

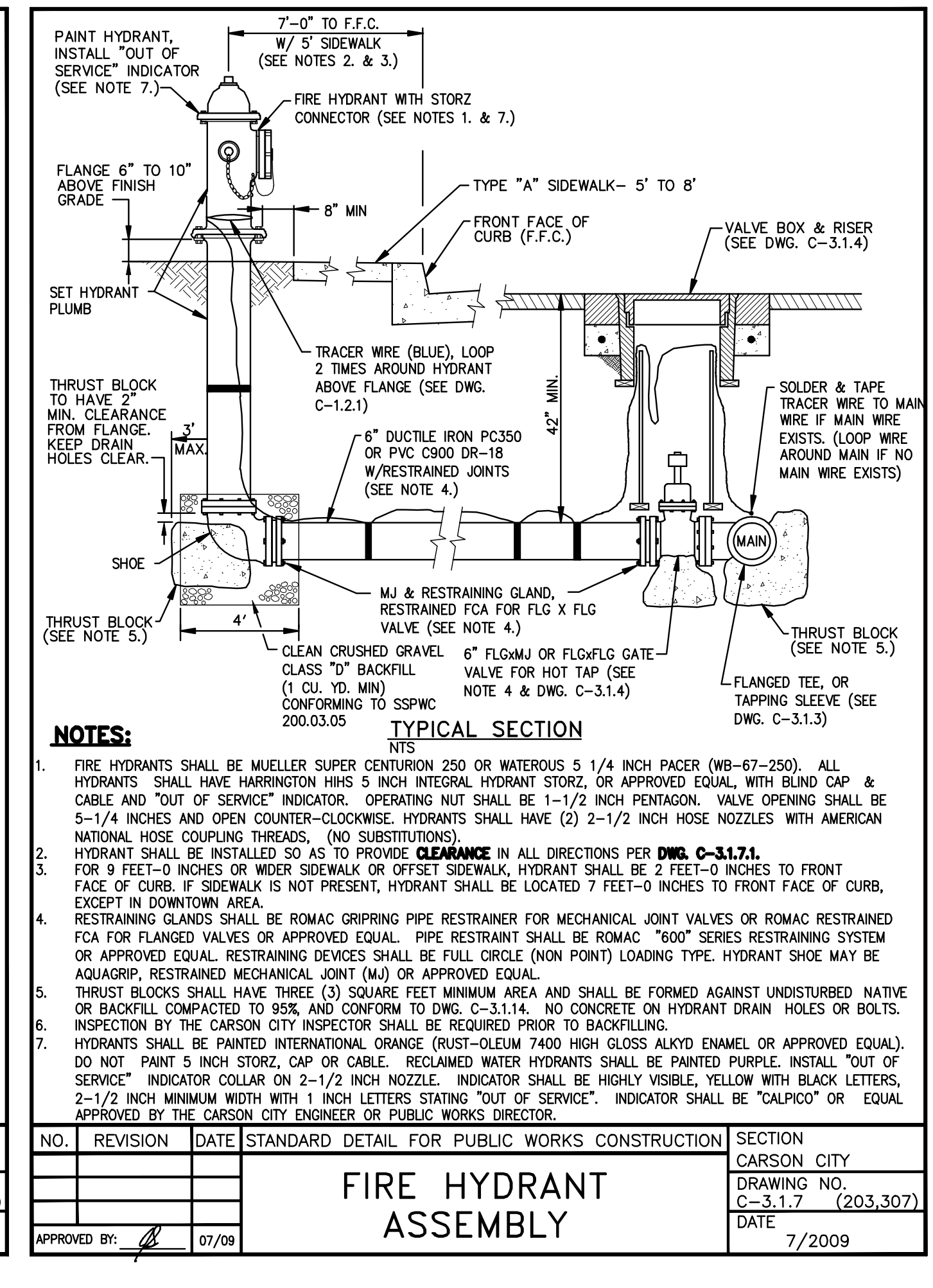
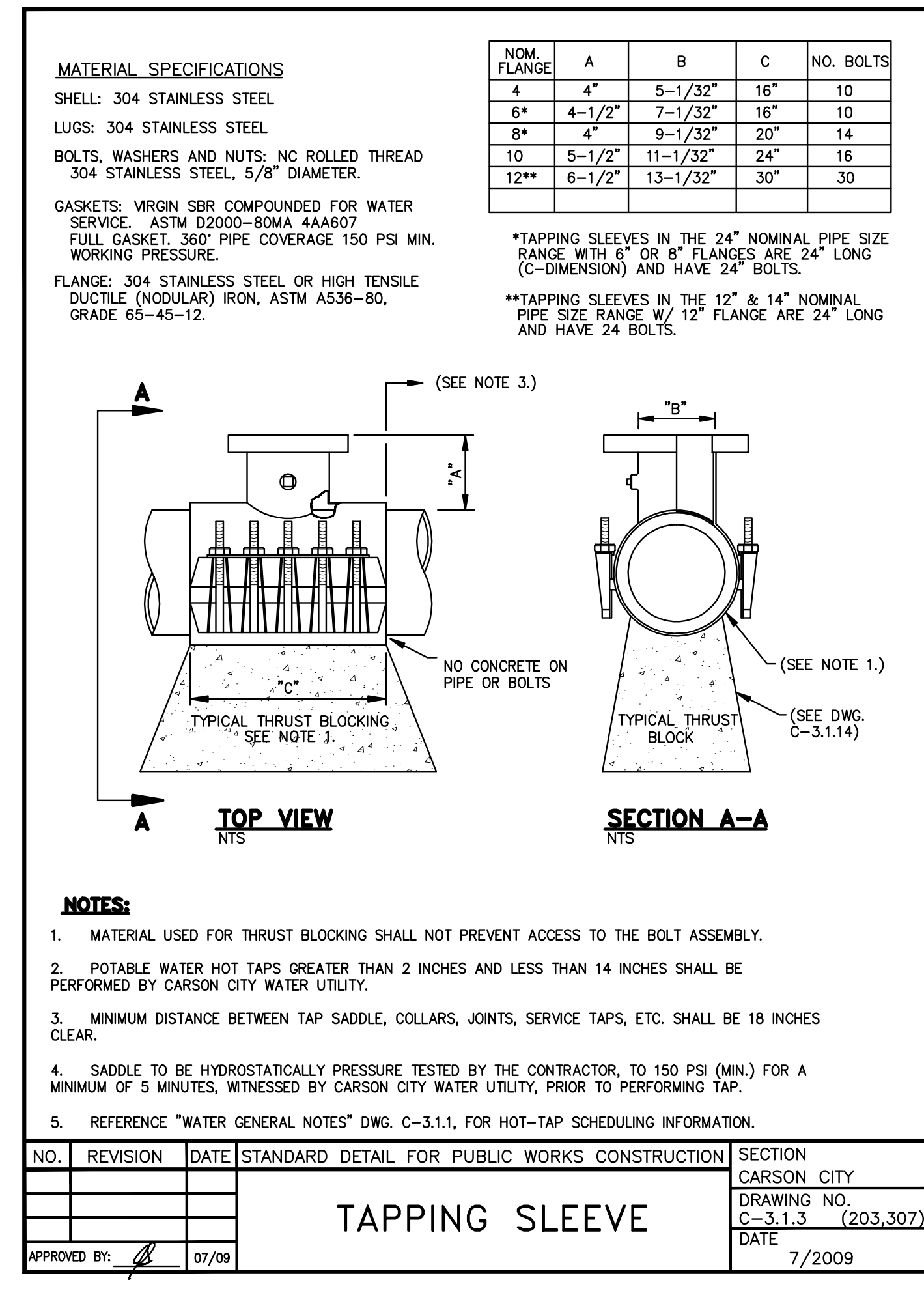
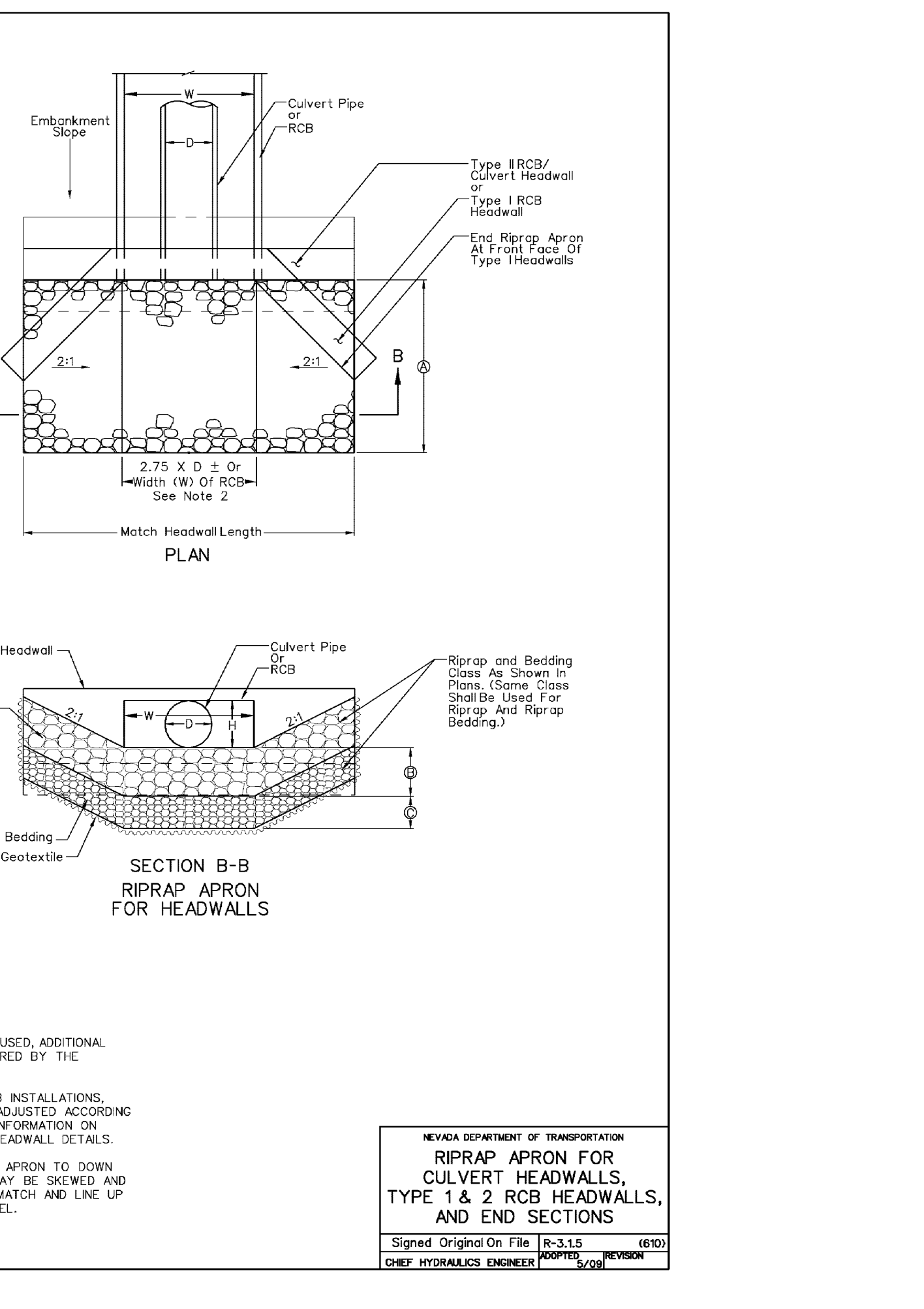
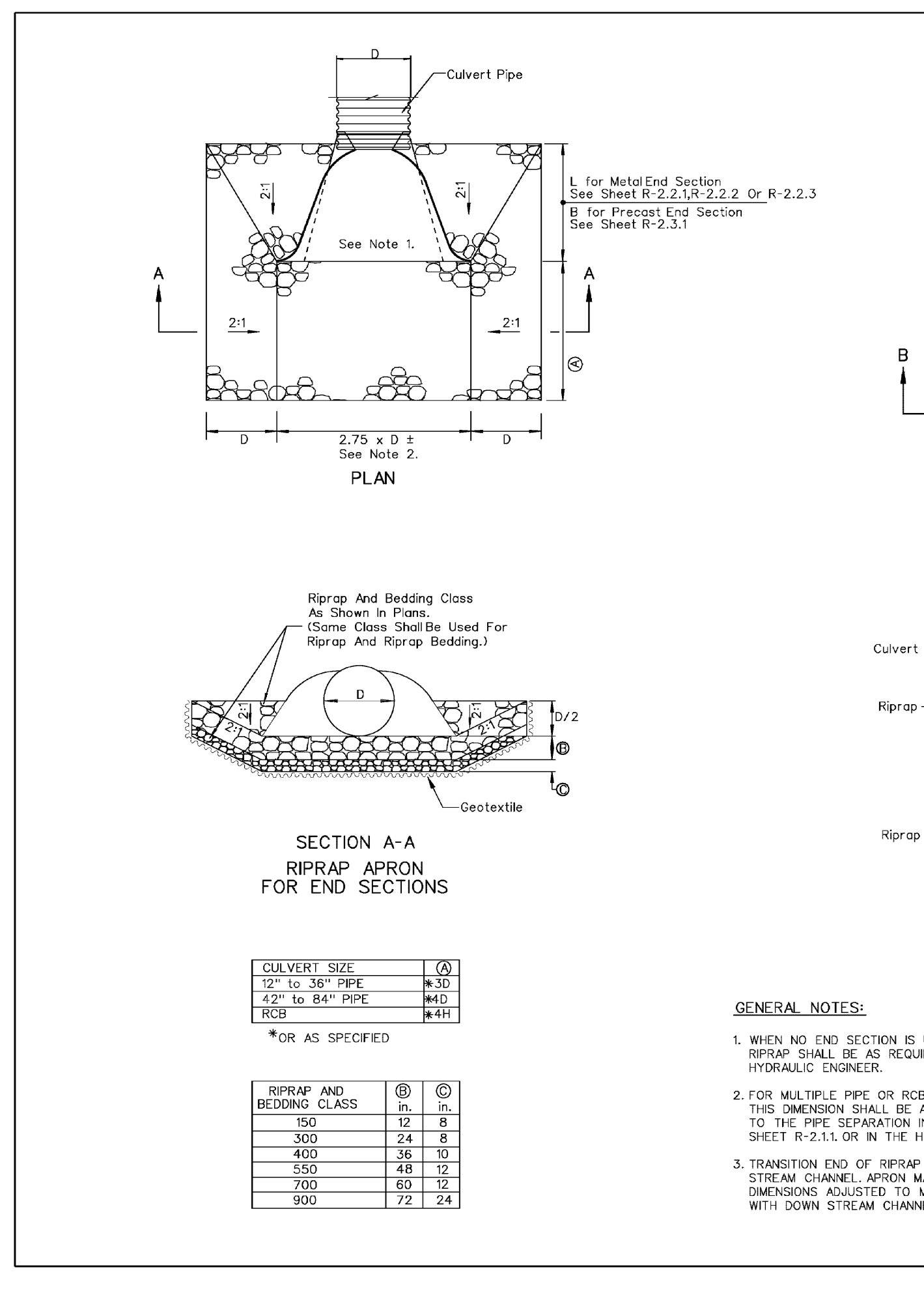
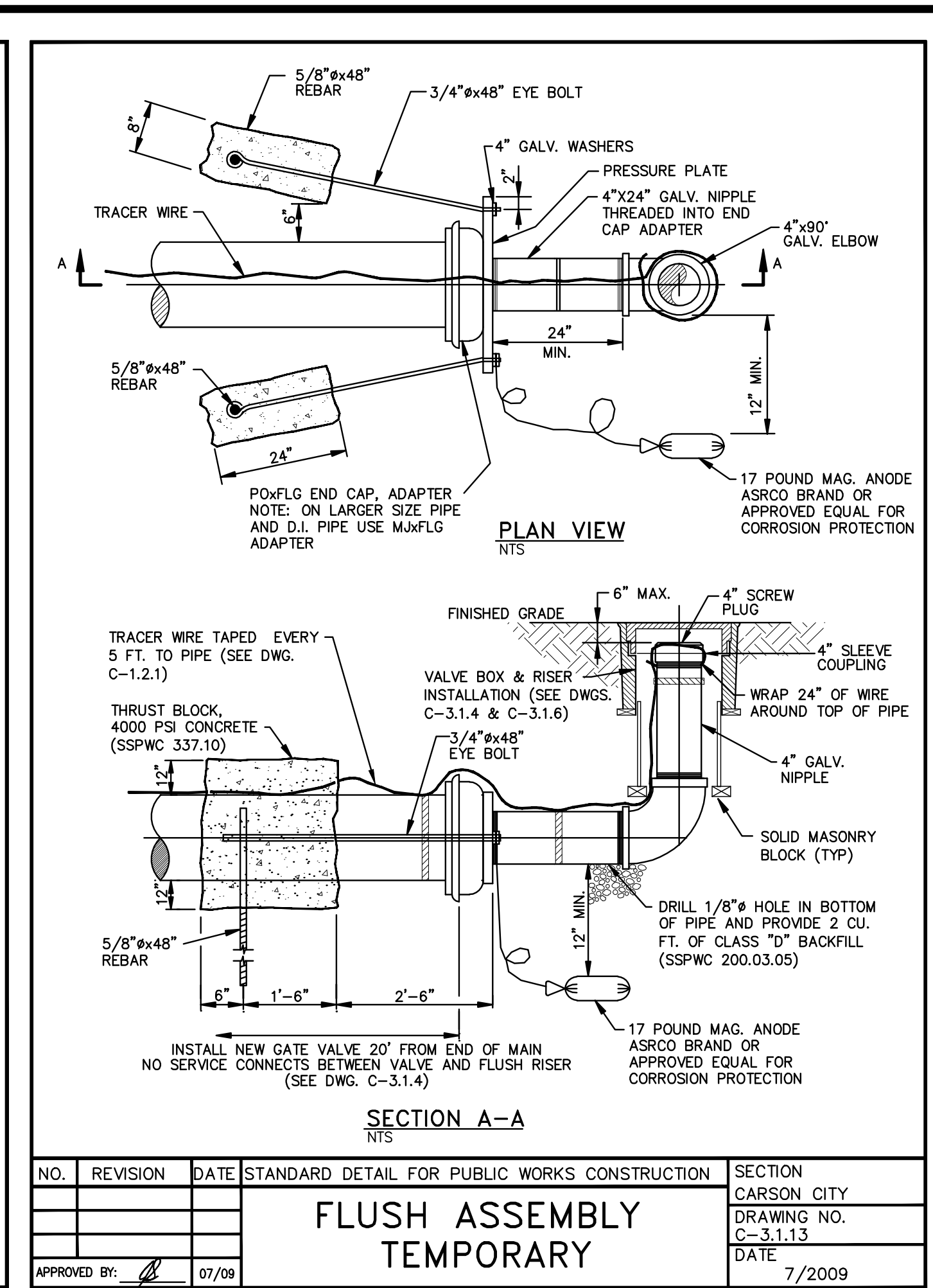
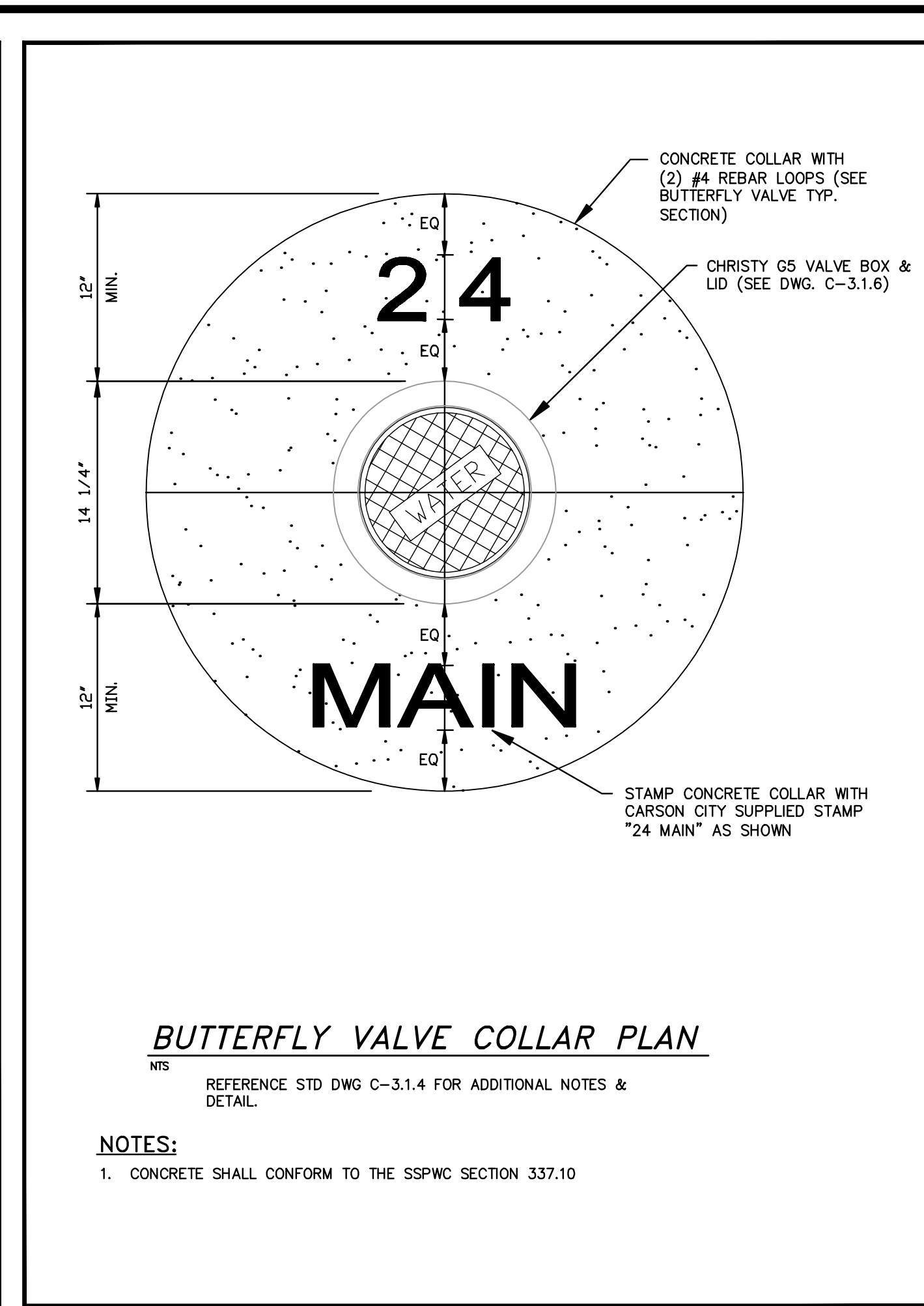
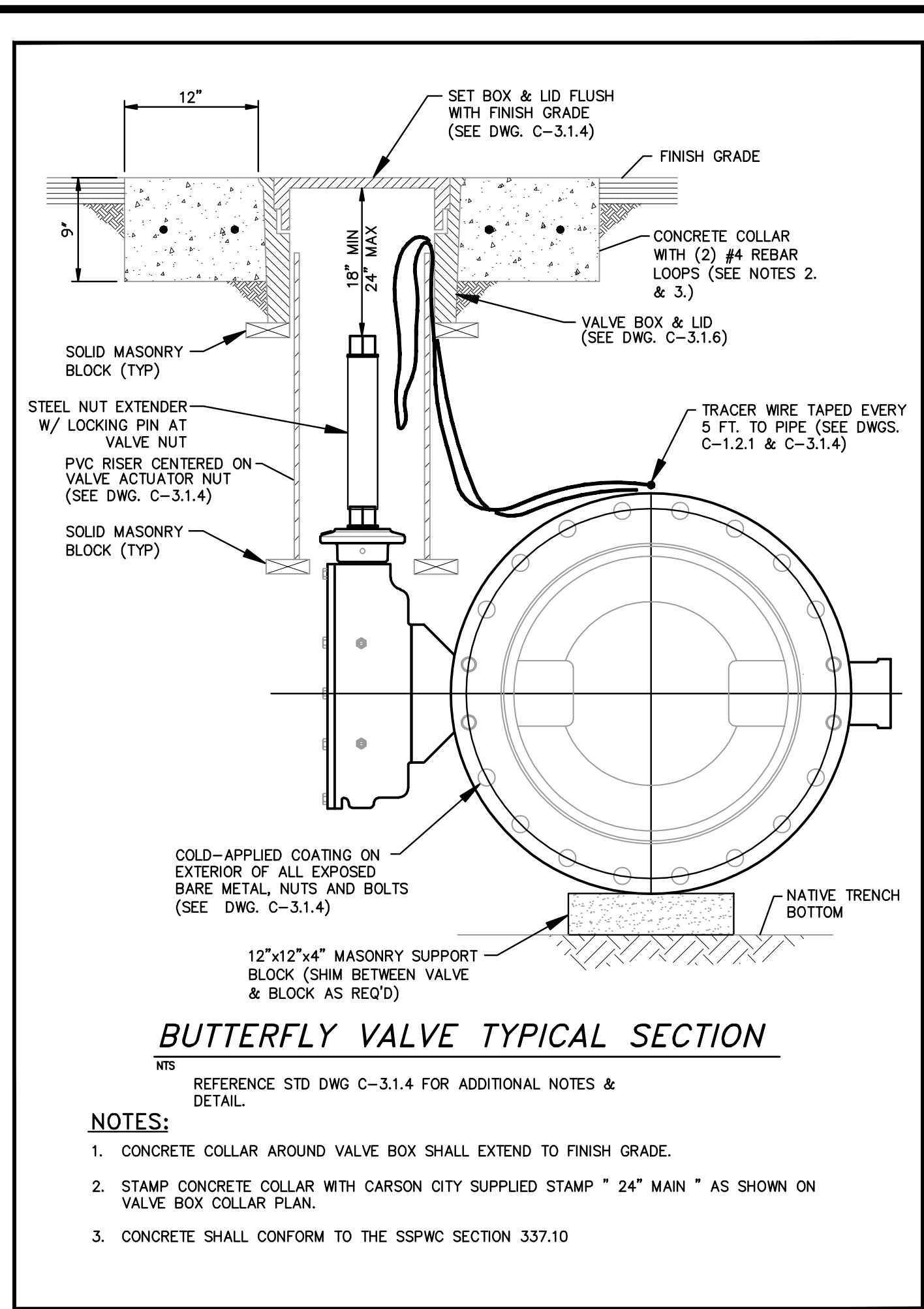
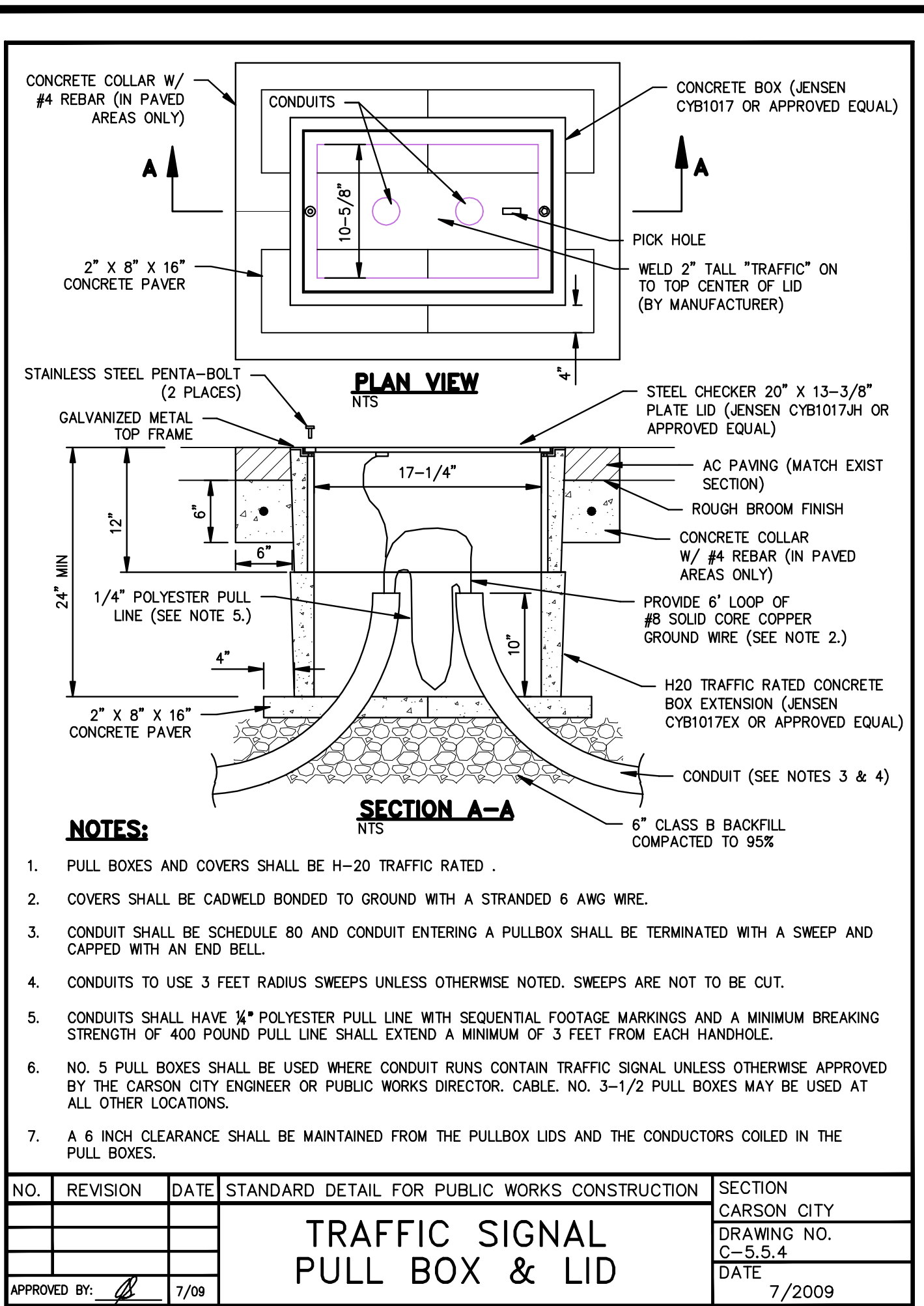


NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
				CARSON CITY
				DRAWING NO. C-5.1.6
				DATE 7/2009

PAVEMENT PATCH

COSTCO INTERTIE & VISTA GRANDE WATERLINE
PROJECT No: 04.1000
STANDARD DETAILS

FOR BIDDING PURPOSES ONLY



RCB
 PROJ. MGR.:
 PROJ. ASSOC.:
 CHECKED BY:
 DWG NO.:
 SCALE (HORIZ):
 SCALE (VERT):
 PLOT DATE:

CARSON CITY
 PUBLIC WORKS DEPARTMENT
 3505 BUTTE WAY CARSON CITY, NEVADA 89701
 PH: 887-2355 FAX: 887-2112

Manhard
 CONSULTING LTD.
 8476 Paradise Parkway, Suite 12
 Reno, NV 89502
 PH: (775) 882-5680

REBECCA C. BERNIER
 CIVIL ENGINEER
 No. 10976

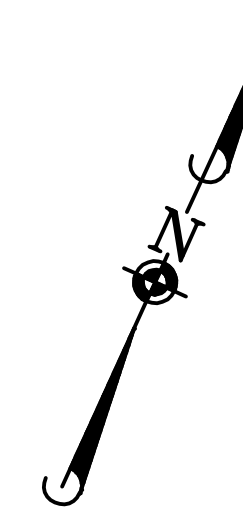
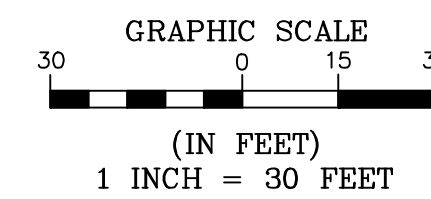
COSTCO INTERTIE & VISTA GRANDE WATERLINE
 PROJECT No: 04.1000
 STANDARD DETAILS

SHEET
 27
 OF
 28

FOR BIDDING PURPOSES ONLY



CONDUIT WORK ALONG PATHWAY THROUGH FUJI PARK



January 21, 2014 - 11:25 Date Name: P:\Costco\15\New\Final Drawings\PLAN SET\VISTA GRANDE\12 PLAN & PROFILE.dwg User: brcb

COSTCO INTERTIE & VISTA GRANDE WATERLINE PROJECT No: 04.1000 PATHWORK THROUGH FUJI PARK	SHEET 28 OF 28	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>APP.</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	REV.	DATE	DESCRIPTION	BY	APP.																																																				Manhard CONSULTING LTD. 3505 BUTTE WAY, SUITE 12 CARSON CITY, NV 89706 PH: (775) 882-5650	CARSON CITY PUBLIC WORKS DEPARTMENT 3505 BUTTE WAY, CARSON CITY, NEVADA 89701 PH: 887-2355 FAX: 887-2112	PROJ. MGR.: RCB PROJ. ASSOC.: CHECKED BY: RCB DWG NO.: CCCC15 SCALE (HORIZ): 1" = 20' SCALE (VERT): 1" = 20' PLOT DATE: JAN 2014
REV.	DATE	DESCRIPTION	BY	APP.																																																									

FOR BIDDING PURPOSES ONLY