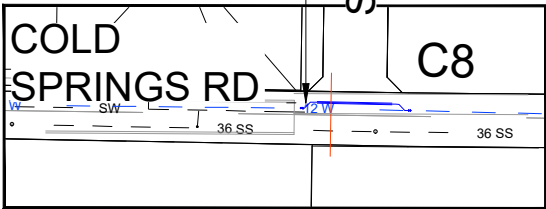
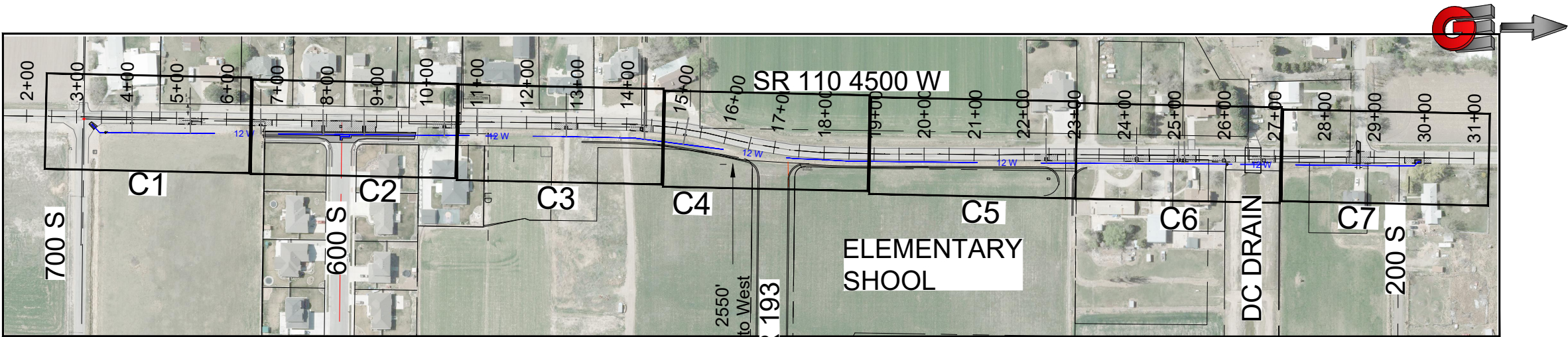


HOOPER WATER IMPROVEMENT DISTRICT

#162-4500W; 700S TO 200S

WEST POINT CITY, DAVIS COUNTY, UTAH



LEGEND

- W —

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PROPOSED CULINARY WATER LINE

EXISTING CULINARY WATER LINE

PROPOSED CULINARY WATER LATERAL

PROPOSED CULINARY WATER LATERAL WITH 2 INCH SLEEVE

EXISTING CULINARY WATER LATERAL

EXISTING STORM DRAIN LINE

EXISTING GRAVITY SEWER LINE

Note: Type of Sewer (forced main/vacuum sewer) is Denoted on each sheet.

EXISTING COMCAST LINE

EXISTING IRRIGATION LINE

EXISTING TELEPHONE LINE

EXISTING QUESTAR GAS LINE

EXISTING OVERHEAD POWER LINES

EXISTING OPEN DITCH
- PP

WM

EXISTING POWER POLE

EXISTING WATER METER

EXISTING FIRE HYDRANT

PROPOSED FIRE HYDRANT

EXISTING WATER VALVE

PROPOSED WATER VALVE

2' X 4' STORM DRAIN CATCH BASIN

STORM DRAIN MANHOLE COVER

SEWER MANHOLE COVER

MAIL BOX

IRRIGATION BOX

MONUMENT
- CONTRACTOR SHALL OBTAIN UDOT ENCROACHMENT PERMIT REGION 1 AND ADHERE TO UTAH RULE R930-7 UTILITY ACCOMMODATION. REFERENCE UDOT PROJECT NUMBER S-0193(26)0 PIN 19855
- Know what's below.

Call 811 before you dig.

BLUE STAKES OF UTAH

UTILITY NOTIFICATION CENTER, INC.

www.bluestakes.org

1-800-662-4111
- SHEET INDEX  
A - COVER SHEET  
B - GENERAL NOTES  
C1 - C8 PLAN AND PROFILE SHEETS  
D1 - D4 DETAIL SHEETS
- | Revisions |  | Date | Description |
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|------------------------------|--|
| COVER                        |  |
| HOOPER WATER I. D.           |  |
| #162-4500W; 700S TO 200S     |  |
| WEST POINT CITY, DAVIS, UTAH |  |
- GARDNER

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- A  
14

R:\0813 - HWD\2106 - WO#162 4500 W 700 S TO 200 S\DESIGN\DWG\2106 - 4500 W WATERLINE SHEETS\_RECOVER.DWG

## GENERAL NOTES

- ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION OF SITE IMPROVEMENTS SHALL MEET OR EXCEED THE STANDARDS AND SPECIFICATIONS SET FORTH BY THE ENGINEER, PLANNING, CODES AND SPECIFICATIONS AND APPLICABLE COUNTY, STATE AND FEDERAL REGULATIONS. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND SPECIFICATIONS, OR ANY APPLICABLE STANDARDS, THE HIGHER QUALITY STANDARD SHALL APPLY.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND OR ELEVATION OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY PERTINENT LOCATIONS AND ELEVATIONS, ESPECIALLY AT THE CONNECTION POINTS AND AT POTENTIAL UTILITY CONFLICTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM ALL APPLICABLE AGENCIES. THE CONTRACTOR SHALL NOTIFY THE DESIGNATED PUBLIC WORKS INSPECTOR AT LEAST 48 HOURS PRIOR TO THE START OF ANY EARTH DISTURBING ACTIVITY, OR CONSTRUCTION ON ANY AND ALL PUBLIC IMPROVEMENTS.
- THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THE DISTRICT AND ALL UTILITY COMPANIES INVOLVED WITH REGARD TO RELOCATIONS OR ADJUSTMENTS OF EXISTING UTILITIES DURING CONSTRUCTION AND TO ASSURE THAT THE WORK IS ACCOMPLISHED IN A TIMELY FASHION AND WITH A MINIMUM DISRUPTION OF SERVICE.
- THE CONTRACTOR SHALL HAVE ONE (1) COPY OF APPROVED PLANS, AND ONE (1) COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS AND A COPY OF ANY PERMITS NEEDED FOR THE JOB, ON SITE AT ALL TIMES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY.
- IF DURING THE CONSTRUCTION PROCESS CONDITIONS ARE ENCOUNTERED BY THE CONTRACTOR, HIS SUBCONTRACTORS, OR OTHER AFFECTED PARTIES, WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETION OF THE INTENDED IMPROVEMENTS SHOWN ON THESE DRAWINGS OR DESIGNATED TO BE PROVIDED, INSTALLED, CONSTRUCTED, REMOVED AND RELOCATED UNLESS SPECIFICALLY NOTED OTHERWISE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADWAYS FREE AND CLEAR OF ALL CONSTRUCTION DEBRIS AND DIRT TRACKED FROM THE SITE.
- THE CONTRACTOR SHALL BE **RESPONSIBLE FOR RECORDING AS-BUILT DRAWINGS ON A SET OF RECORD DRAWINGS KEPT AT THE CONSTRUCTION SITE**, AND AVAILABLE TO THE DISTRICT INSPECTOR AT ALL TIMES.
- THE CONTRACTOR SHALL SEQUENCE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO MINIMIZE POTENTIAL UTILITY CONFLICTS. IN GENERAL, STORM SEWER AND SANITARY SEWER SHOULD BE CONSTRUCTED PRIOR TO INSTALLATION OF WATER LINES AND DRY UTILITIES.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL UTILITY RELOCATIONS CONSISTENT WITH THE CONTRACTORS SCHEDULE FOR THIS PROJECT, WHETHER SHOWN OR NOT SHOWN AS IT RELATES TO THE CONSTRUCTION ACTIVITIES CONTEMPLATED IN THESE PLANS.
- ALL CONSTRUCTION WITHIN THE UDOT RIGHT-OF-WAY SHALL CONFORM TO THE MOST CURRENT UDOT STANDARD (INCLUDING SUPPLEMENTAL) DRAWINGS AND SPECIFICATIONS.
- THE CONTRACTOR IS TO OBTAIN AN ENCROACHMENT PERMIT FROM THE APPLICABLE UDOT REGION PERMIT OFFICE PRIOR TO COMMENCING WORK WITHIN UDOT RIGHT-OF-WAY. WORKING HOUR LIMITATIONS WILL BE LISTED IN THE LIMITATIONS SECTION OF THE ENCROACHMENT PERMIT.
- UDOT RESERVES THE RIGHT, AT ITS OPTION, TO INSTALL A RAISED MEDIAN ISLAND OR RESTRICT THE ACCESS TO A RIGHT-IN OR RIGHT-OUT AT ANY TIME.
- OWNER, DEVELOPER, AND CONTRACTOR ARE RESPONSIBLE FOR ANY DAMAGES DIRECTLY OR INDIRECTLY WITHIN THE UDOT RIGHT-OF-WAY AS A RESULT OF DEVELOPMENT ACTIVITIES.
- OWNER, DEVELOPER, AND/OR CONTRACTOR IS REQUIRED TO HIRE AN INDEPENDENT COMPANY FOR ALL TESTING WITHIN THE UDOT RIGHT-OF-WAY.
- ALL SIGNS INSTALLED ON THE UDOT RIGHT-OF-WAY MUST BE HIGH INTENSITY GRADE (TYPE XI SHEETING) WITH A B3 SLIP BASE. INSTALL ALL SIGNS PER UDOT SN SERIES STANDARD DRAWINGS.
- COMPLY WITH THE REQUIREMENTS OF UTAH CODE 17-23-14 (DISTURBED CORNERS - COUNTY SURVEYOR TO BE NOTIFIED - COORDINATION WITH CERTAIN STATE AGENCIES).

## NOTICE TO CONTRACTOR

ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT ALL EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS: OF THE U.S. DEPARTMENT OF LABOR AND THE STATE OF UTAH DEPARTMENT OF INDUSTRIAL RELATIONS CONSTRUCTION SAFETY ORDERS". THE CIVIL ENGINEER SHALL NOT BE RESPONSIBLE IN ANY WAY FOR CONTRACTORS AND SUBCONTRACTORS COMPLIANCE WITH SAID REGULATIONS AND ORDERS.

CONTRACTOR FURTHER AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB-SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE CIVIL ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.

## CULINARY WATER GENERAL NOTES

- ALL INSTALLATION AND MATERIALS INSTALLED SHALL BE NEW AND CONFORM TO HOOOPER WATER I.D. STANDARDS, SPECIFICATIONS AND PLANS.
- ALL INTERIOR SURFACES AND COATINGS SHALL COMPLY WITH ANSI/NSF STANDARD 61 . THIS REQUIREMENT APPLIES TO ANY PIPES AND FITTINGS, PROTECTIVE MATERIALS (E.G., PAINTS, COATINGS, CONCRETE ADMIXTURES, CONCRETE RELEASE AGENTS, OR CONCRETE SEALERS), JOINING AND SEALING MATERIALS (E.G., ADHESIVES, CAULKS, GASKETS, PRIMERS AND SEALANTS) AND MECHANICAL DEVICES (E.G., ELECTRICAL WIRE, SWITCHES, SENSORS, VALVES, OR SUBMERSIBLE PUMPS) THAT MAY COME INTO CONTACT WITH THE DRINKING WATER.
- THE CURRENT REQUIREMENTS OF THE UTAH DIVISION OF DRINKING WATER, GOVERNING THE MATERIALS AND INSTALLATION USED IN THE PROJECT SHALL BE MET.
- THRUST BLOCKING AND MECHANICAL RESTRAINTS ARE REQUIRED AT ALL BENDS AND FITTINGS.
- ALL WATERLINES AT SEWER CROSSINGS SHALL BE LOCATED ABOVE AND HAVE AN 18-INCH VERTICAL SEPARATION FROM THE SEWER PIPE.
- DISINFECTION TESTS SHALL BE PERFORMED AND PAID FOR BY THE DISTRICT, WITH COOPERATION FROM THE CONTRACTOR IN PERFORMING ANY NECESSARY EXCAVATION AND SUBSEQUENT BACKFILLING AT NO ADDITIONAL COST TO THE DISTRICT.
- CHLORINATION OF COMPLETED WATER LINE. THE NEW WATER LINES SHALL BE DISINFECTED BY CHLORINATION IN ACCORDANCE WITH AWWA STANDARD C651-14. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS RELATED TO THE CHLORINATION OF THE COMPLETED WATER LINE. THIS TEST SHALL BE PERFORMED BY THE DISTRICT. PRIOR TO CONNECTION OF THE NEW WATER LINES TO THE EXISTING WATER SYSTEM. THE CONTRACTOR SHALL NOTIFY THE WATER UTILITY AT LEAST 24 HOURS BEFORE THE TESTING IS DESIRED.
- A MINIMUM HORIZONTAL CLEARANCE OF 10 FEET SHALL BE MAINTAINED BETWEEN CULINARY WATER AND SANITARY SEWER MAINS.
- UNLESS OTHERWISE SPECIFIED, ALL WATERLINES SHALL BE AWWA C900 DR18 AND SHALL BE PRESSURE TESTED AT 200 PSI FOR AT LEAST 2 HOURS, ACCORDING TO TO AWWA STANDARD C600.
- CONTRACTOR SHALL LOCATE VALVES PRIOR TO CONNECTION WITH EXISTING SYSTEM, BUT SHALL NOT OPERATE ANY VALVE WITHOUT PERMISSION FROM THE WATER UTILITY.
- ALL WATER MAINS, VALVES, FIRE HYDRANTS, SERVICES AND APPURTENANCES SHALL BE INSTALLED, TESTED, AND APPROVED PRIOR TO COMMISSIONING WATER LINE.
- THE WATER UTILITY REQUIRES THE USE OF CORROSION RESISTANT MATERIALS FOR ALL CULINARY WATER IMPROVEMENTS. SPECIFICALLY, TRIPAC BLUE BOLTS OR STAINLESS STEEL BOLTS MUST BE USED ON ALL FITTINGS. FURTHER, ALL METAL FITTINGS SHALL BE POLY WRAPPED.

## UTILITY DISCLAIMER

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THOSE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF CONTRACTOR'S FAILURE TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT.

Revisions	Date	9/7/2022
	Description	
	Date	
	Description	
<div>PROFESSIONAL ENGINEER 9/7/2022 10382576 MICHAEL DUANE DURTSCI STATE OF UTAH</div>		

NOTES	HOOPER WATER I. D.
	#162-4500W; 700S TO 200S WEST POINT CITY, DAVIS, UTAH

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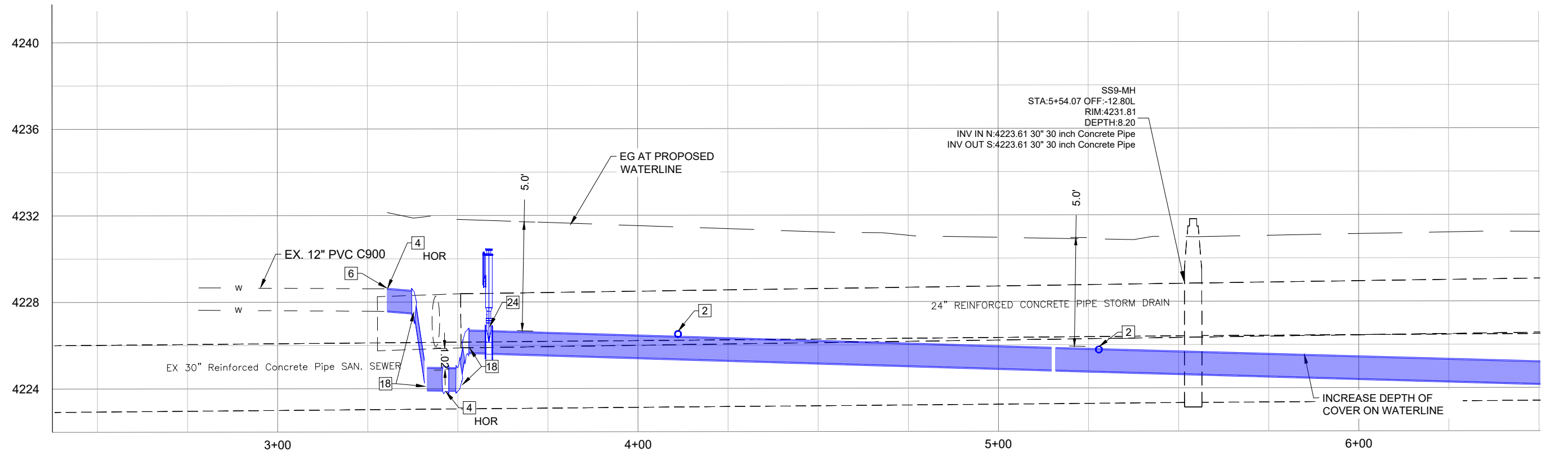
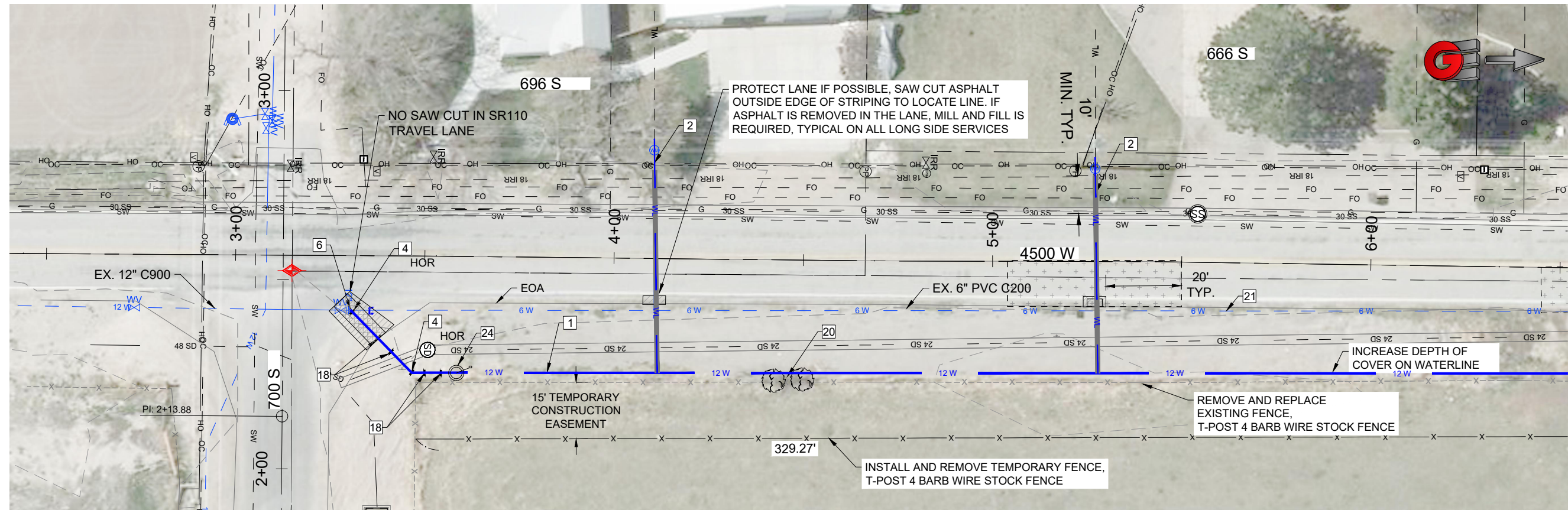
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R:\0813 - HWID\2106 - WQ#162 4500 W 700 S TO 200 S\DESIGN\DWG\2106 - 4500 W WATERLINE SHEETS\_RECOVER.DWG



KEYNOTES:

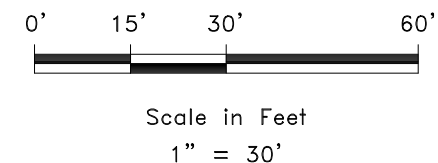
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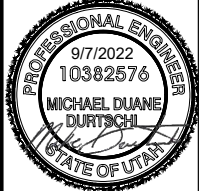
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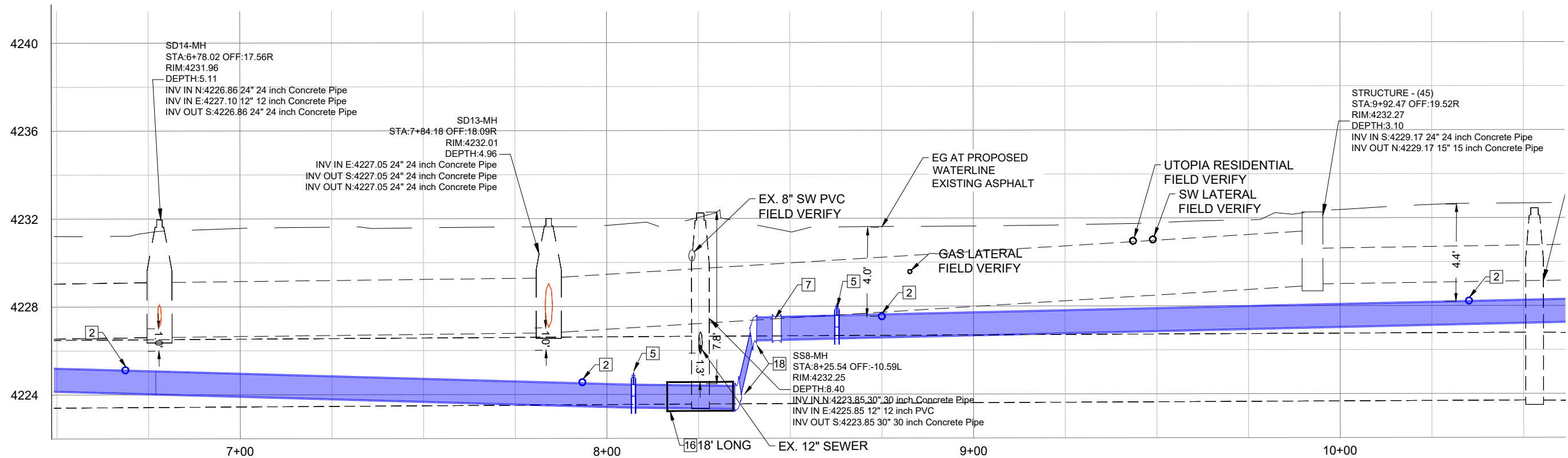
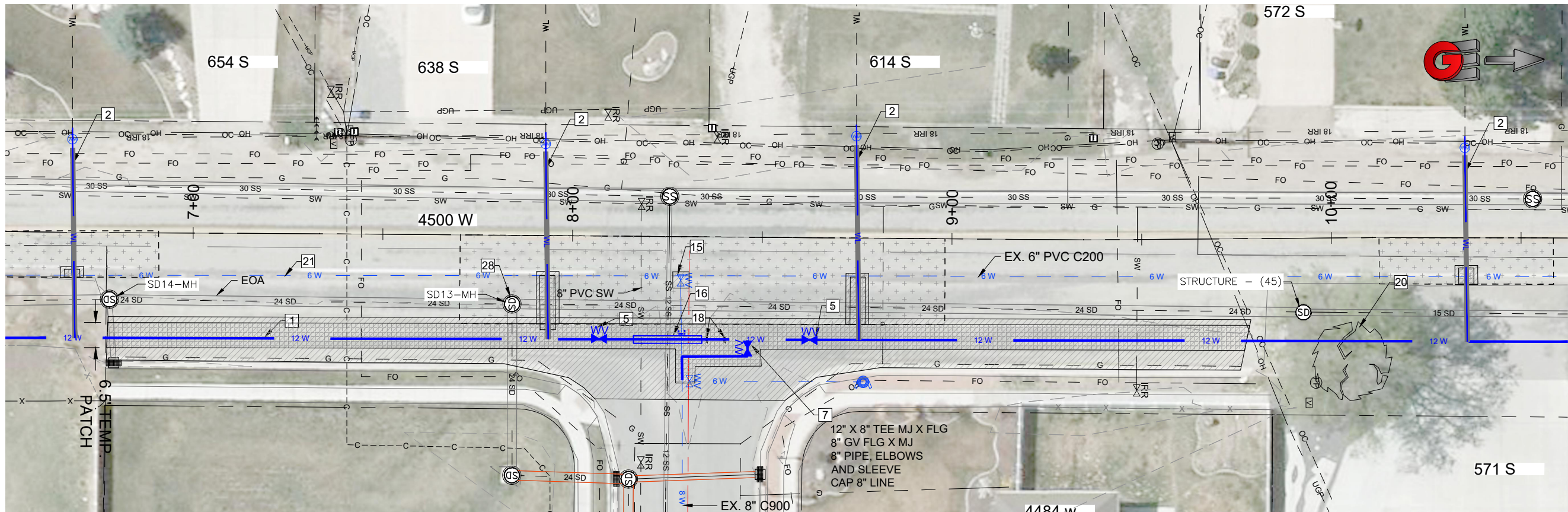
	<b>GARDNER ENGINEERING</b> CIVIL • LAND PLANNING MUNICIPAL • LAND SURVEYING 5150 SOUTH 375 EAST OGDEN, UT OFFICE: 801.476.0202 FAX: 801.476.0066	<b>P+P 1</b>		<b>HOOPER WATER I.D.</b>		<b>#162-4500W; 700S TO 200S</b>		<b>WEST POINT CITY, DAVIS, UTAH</b>	
		Date: 9/7/2022		Scale: 1" = 30'		Designed: MDD		Drafted: MDD	
		Revisions		Description		Checked: DLW			
		Date							



**C1**

**14**





KEYNOTES:

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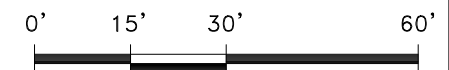
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Scale in Feet  
1" = 30'

P+P 2

HOOPER WATER I.D.

#162-4500W; 700S TO 200S

WEST POINT CITY, DAVIS, UTAH



C2

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Revisions

Date

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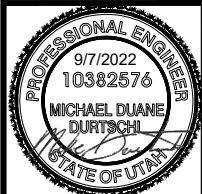
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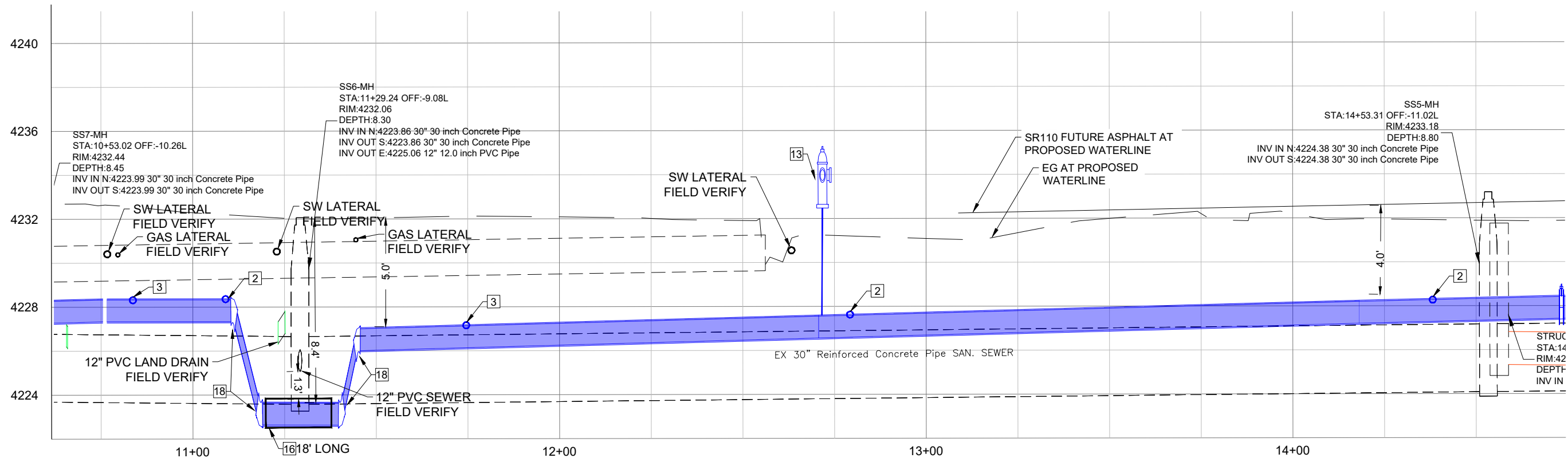
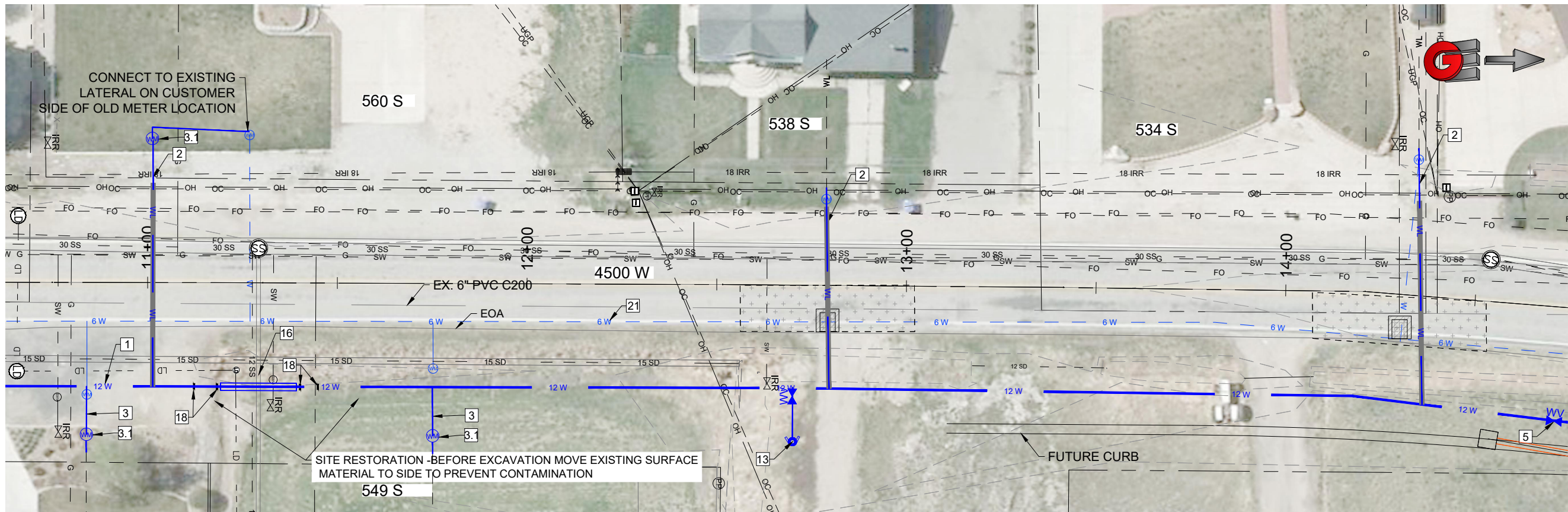
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Drafted: MDD

Checked: DLW







KEYNOTES:

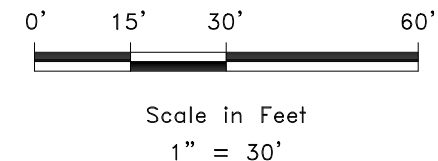
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Date: 9/7/2022	Scale: 1" = 30'
Designed: MDD	Drafted: MDD
Checked: DLW	

PROFESSIONAL ENGINEER

9/7/2022

10382576

MICHAEL DUANE DURTSCHI

STATE OF UTAH

P+P 3

HOOPER WATER I.D.

#162-4500W; 700S TO 200S

WEST POINT CITY, DAVIS, UTAH

**GARDNER ENGINEERING**

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MUNICIPAL-LAND SURVEYING

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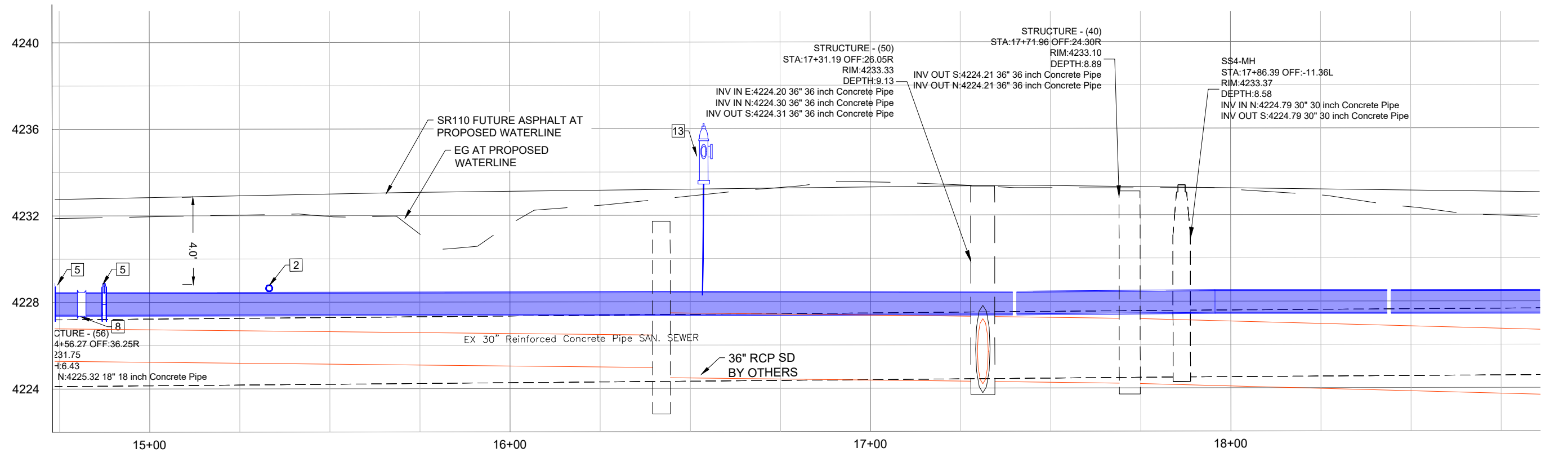
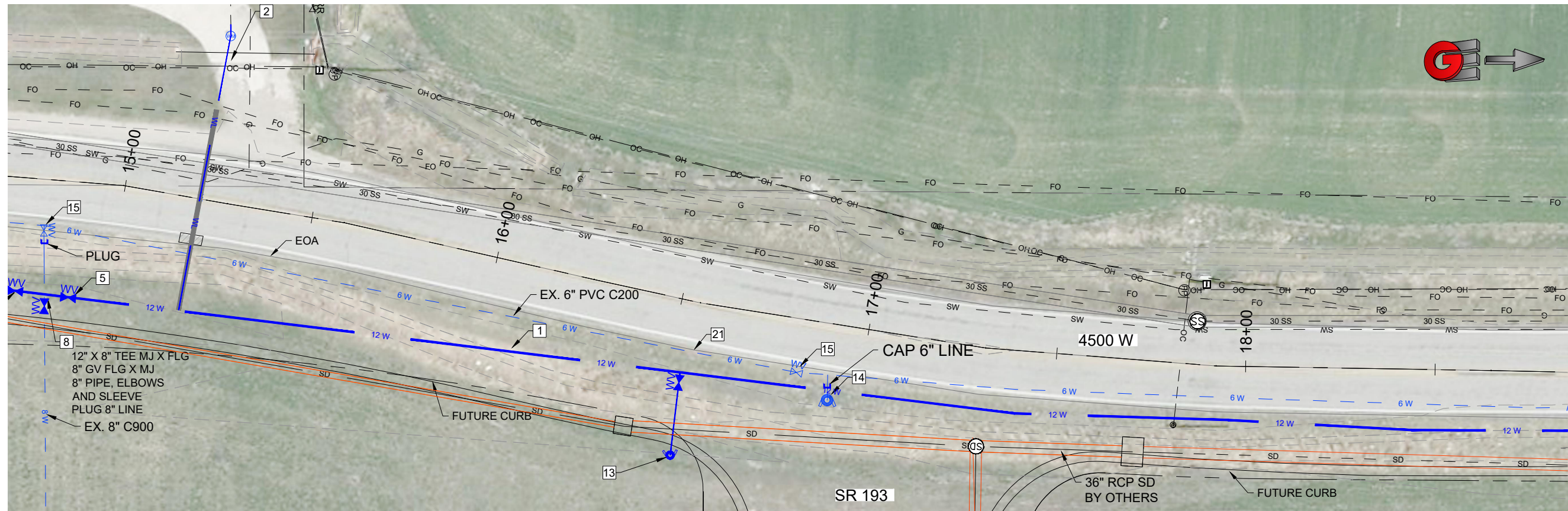
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**C3**

14



R:\0813 - HWID\2106 - WQ#162 4500 W 700 S TO 200 S\DESIGN\DWG\2106 - 4500 W WATERLINE SHEETS\_RECOVER.DWG



KEYNOTES:

- |  |  |  |  |  |
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MICHAEL DUANE  
DURTSCHI  
STATE OF UTAH

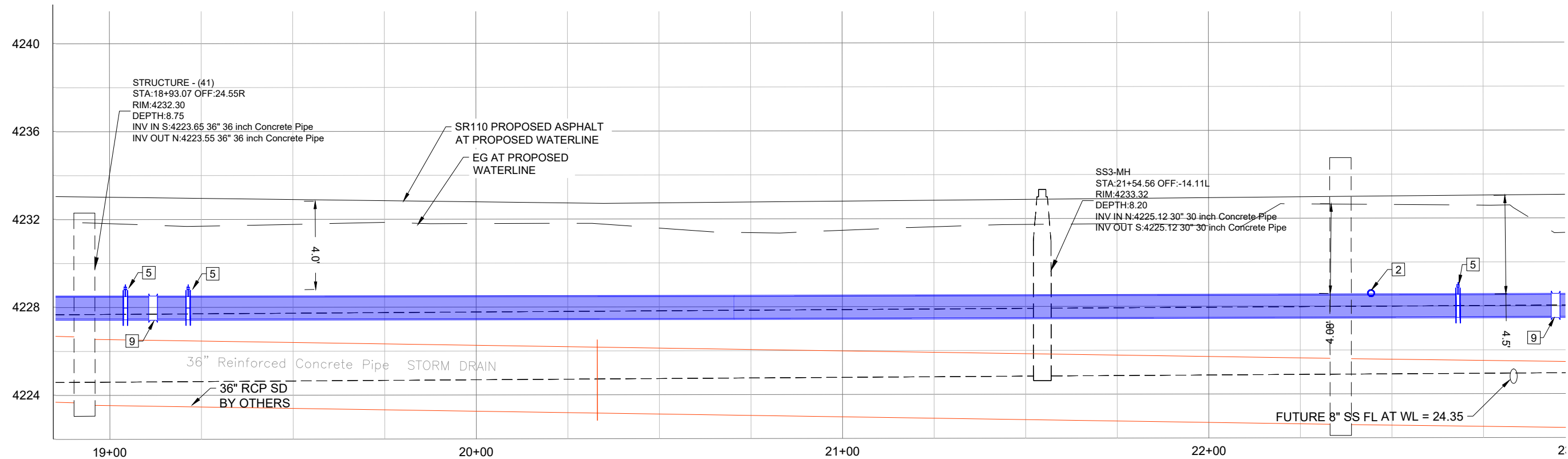
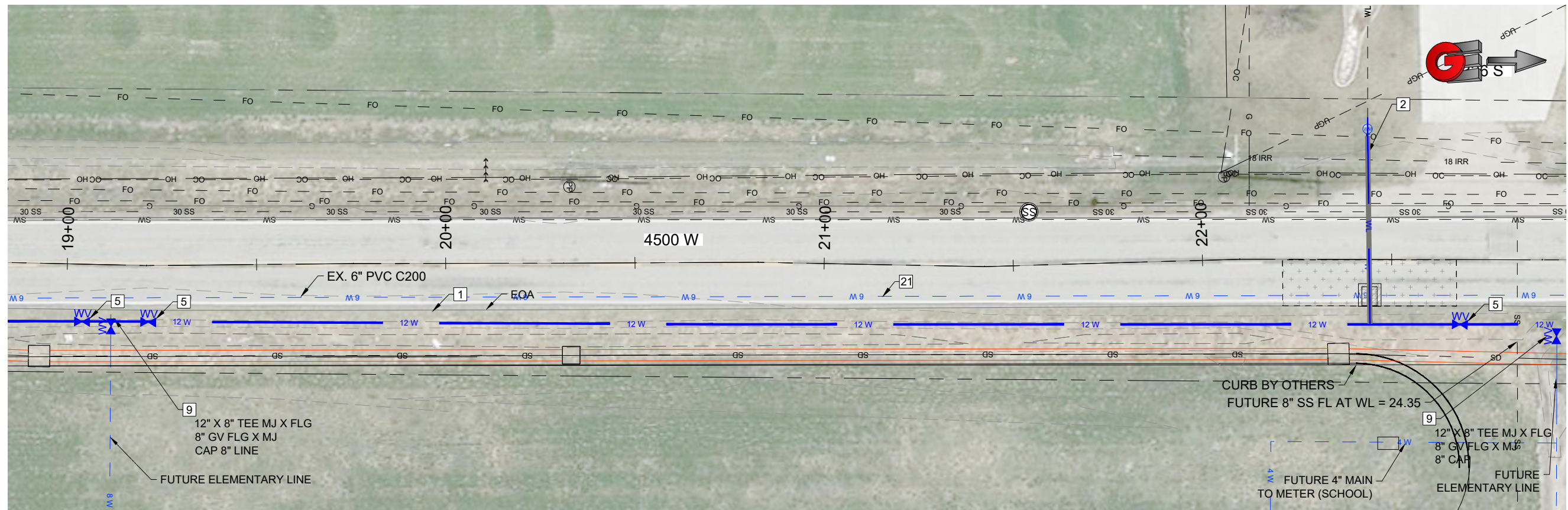
P+P 4  
HOOPER WATER I.D.  
#162-4500W; 700S TO 200S  
WEST POINT CITY, DAVIS, UTAH

**GARDNER  
ENGINEERING**  
CIVIL-LAND PLANNING  
MUNICIPAL-LAND SURVEYING  
5150 SOUTH 375 EAST OGDEN, UT  
OFFICE: 801.476.0202 FAX: 801.476.0090

C4  
14



R:\0813 - HWID\2106 - WO\162 4500 W 700 S TO 200 S\DESIGN\DWG\2106 - 4500 W WATERLINE SHEETS\_RECOVER.DWG



#### KEYNOTES:

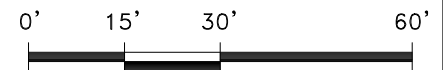
- 1 NEW 12" C900 DR18 PVC WATERLINE
- 2 NEW 1" SERVICE LONG SIDED W/ 2" SLEEVE
- 3 NEW 1" SERVICE SHORT SIDED
- 3.1 NEW RELOCATE WATER METER
- 4 NEW 12" 45° ELBOW
- 5 NEW 12" BUTTERFLY VALVE

- 6 NEW CONNECT TO EXISTING 12" AT 700 S, STA 3+30  
REMOVE 12"x6" REDUCER, CAP 6" LINE
- 7 NEW CONNECT TO EXISTING 8" AT 625 S, STA 5+22
- 8 NEW CONNECT TO EXISTING 8" AT 530 S, STA 14+80
- 9 NEW ELEMENTARY SCHOOL STUB, STA 19+20 & STA 22+90
- 10 NEW CONNECT TO EXISTING 4" AT 200 S, STA 28+70
- 11 NEW CONNECT TO EXISTING 4" AT 200 S, STA 29+45
- 12 NEW CONNECT TO EXISTING 6" NORTH TIE IN, STA 29+95
- 13 NEW FIRE HYDRANT ASSEMBLY

- 14 REMOVE FIRE HYDRANT
- 15 ABANDON VALVE BELOW GRADE
- 16 SEWER CROSSING - 16" STEEL CASING
- 17 CULVERT CROSSING - 24" STEEL CASING
- 18 12" (2) FITTING VERTICAL LOOP
- 19 UDOT CROSSING - 16" STEEL CASING
- 20 REMOVE AND DISPOSE OF TREES
- 21 FLOW FILL ABANDON LINE

- 22 NEW CONNECT TO 12" CLASS PIPE, COLD SPRINGS RD.
- 23 SR 193 CROSSING - 24" STEEL CASING
- 24 NEW COMBINATION AIR/VAC VALVE
- 25 ADJUST SD CONCRETE COLLAR
- 26 SEWER CROSSING STRUCTURAL SUPPORT
- 27 REMOVE AND INSTALL T-POST FENCING
- 28 TEMPORARY PATCH  
REMOVE AND REPLACE ASPHALT

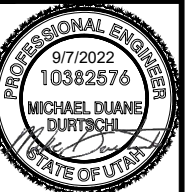
- 29 PERMANENT PATCH  
REMOVE AND REPLACE ASPHALT
- 30 2" MILL AND FILL



Scale in Feet  
1" = 30'

Date: 9/7/2022  
Scale: 1" = 30'  
Designed: MDD  
Drafted: MDD  
Checked: DLW

Revisions	Description
Date	

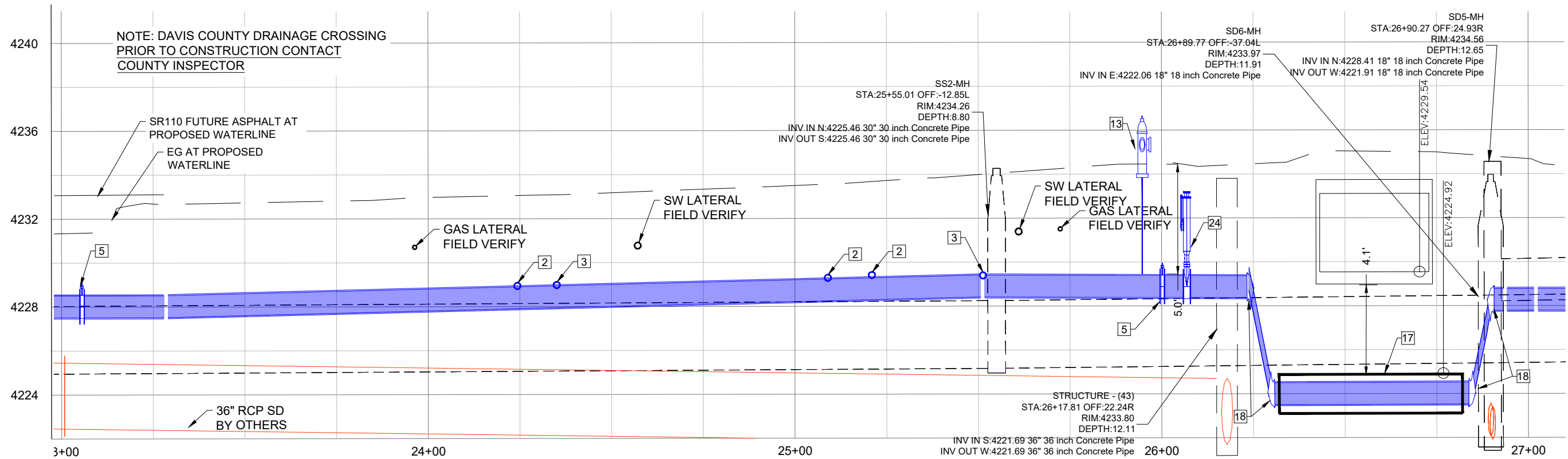
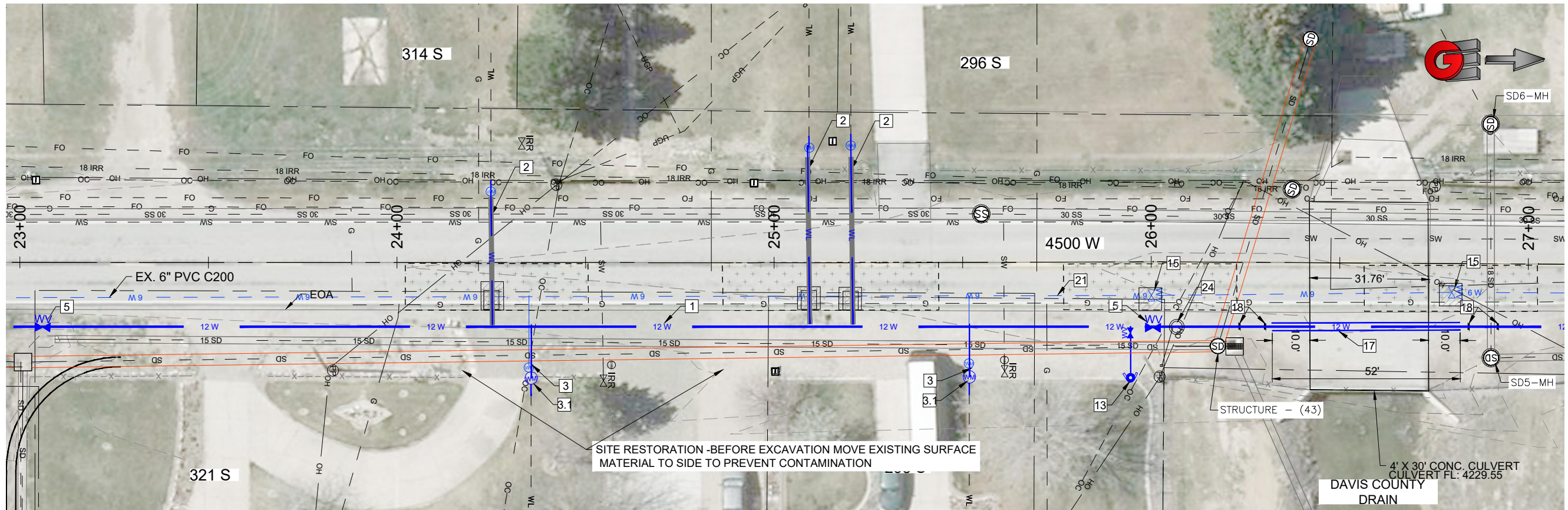


P+P 5  
HOOPER WATER I.D.  
#162-4500W; 700S TO 200S  
WEST POINT CITY, DAVIS, UTAH



C5  
14





KEYNOTES:

- |  |  |  |  |  |
|--|--|--|--|--|
| 1 NEW 12" C900 DR18 PVC WATERLINE        | 6 NEW CONNECT TO EXISTING 12" AT 700 S, STA 3+30<br>REMOVE 12"x6" REDUCER, CAP 6" LINE | 14 REMOVE FIRE HYDRANT                 | 22 NEW CONNECT TO 12" CLASS PIPE, COLD SPRINGS RD. | 29 PERMANENT PATCH<br>REMOVE AND REPLACE ASPHALT |
| 2 NEW 1" SERVICE LONG SIDED W/ 2" SLEEVE | 7 NEW CONNECT TO EXISTING 8" AT 625 S, STA 5+22  | 15 ABANDON VALVE BELOW GRADE           | 23 SR 193 CROSSING - 24" STEEL CASING              | 30 2" MILL AND FILL                              |
| 3 NEW 1" SERVICE SHORT SIDED             | 8 NEW CONNECT TO EXISTING 8" AT 530 S, STA 14+80                                       | 16 SEWER CROSSING - 16" STEEL CASING   | 24 NEW COMBINATION AIR/VAC VALVE                   |  |
| 3.1 NEW RELOCATE WATER METER             | 9 NEW ELEMENTARY SCHOOL STUB, STA 19+20 & STA 22+90                                    | 17 CULVERT CROSSING - 24" STEEL CASING | 25 ADJUST SD CONCRETE COLLAR                       |  |
| 4 NEW 12" 45° ELBOW                      | 10 NEW CONNECT TO EXISTING 4" AT 200 S, STA 28+70                                      | 18 12" (2) FITTING VERTICAL LOOP       | 26 SEWER CROSSING STRUCTURAL SUPPORT               |  |
| 5 NEW 12" BUTTERFLY VALVE                | 11 NEW CONNECT TO EXISTING 4" AT 200 S, STA 29+45                                      | 19 UDOT CROSSING - 16" STEEL CASING    | 27 REMOVE AND INSTALL T-POST FENCING               |  |
|  | 12 NEW CONNECT TO EXISTING 6" NORTH TIE IN, STA 29+95                                  | 20 REMOVE AND DISPOSE OF TREES         | 28 TEMPORARY PATCH<br>REMOVE AND REPLACE ASPHALT   |  |
|  | 13 NEW FIRE HYDRANT ASSEMBLY   | 21 FLOW FILL ABANDON LINE              |  |  |

Revisions	Date	Description

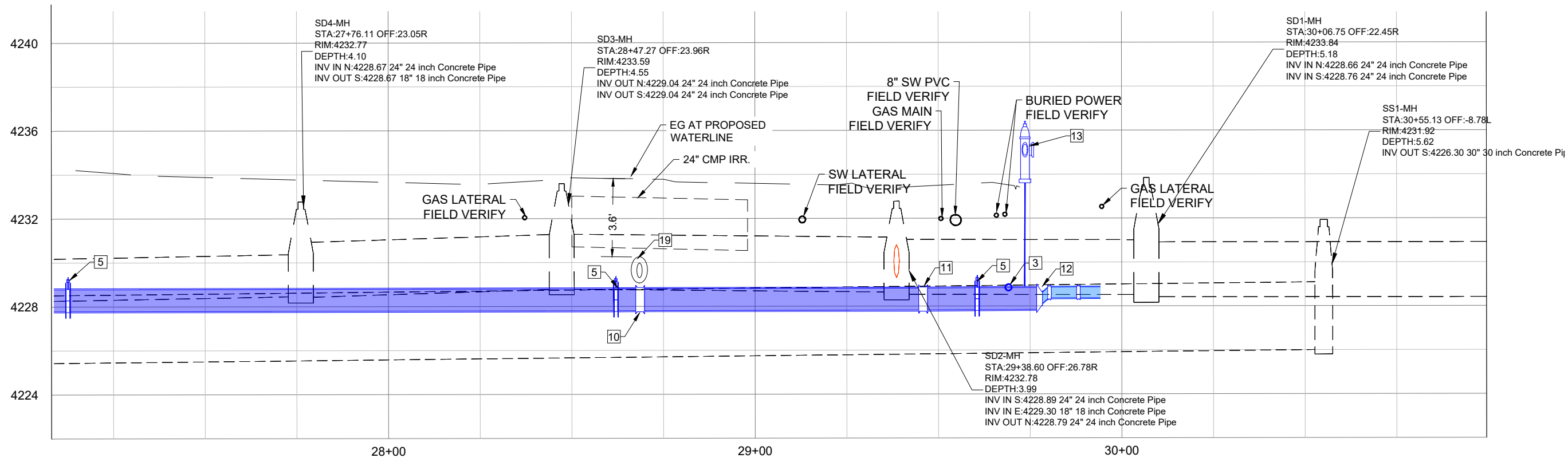
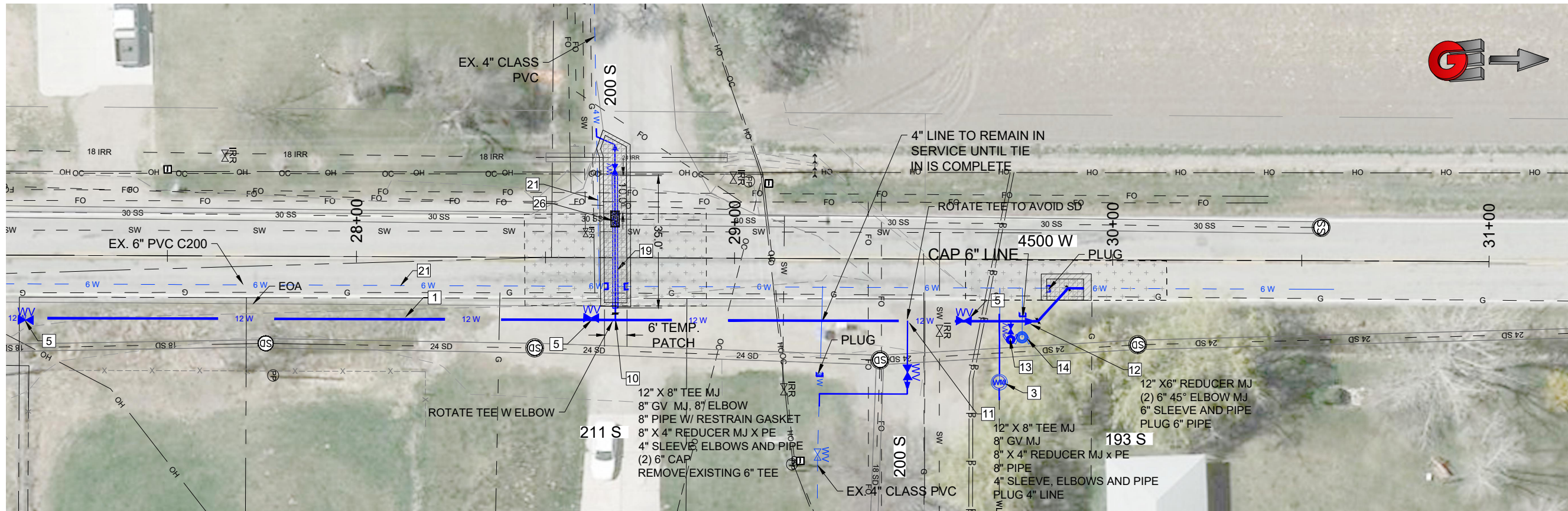
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Designed: MDD	Drafted: MDD
Checked: DLW	



P+P 6  
HOOPER WATER I.D.  
#162-4500W; 700S TO 200S  
WEST POINT CITY, DAVIS, UTAH







**KEYNOTES:**

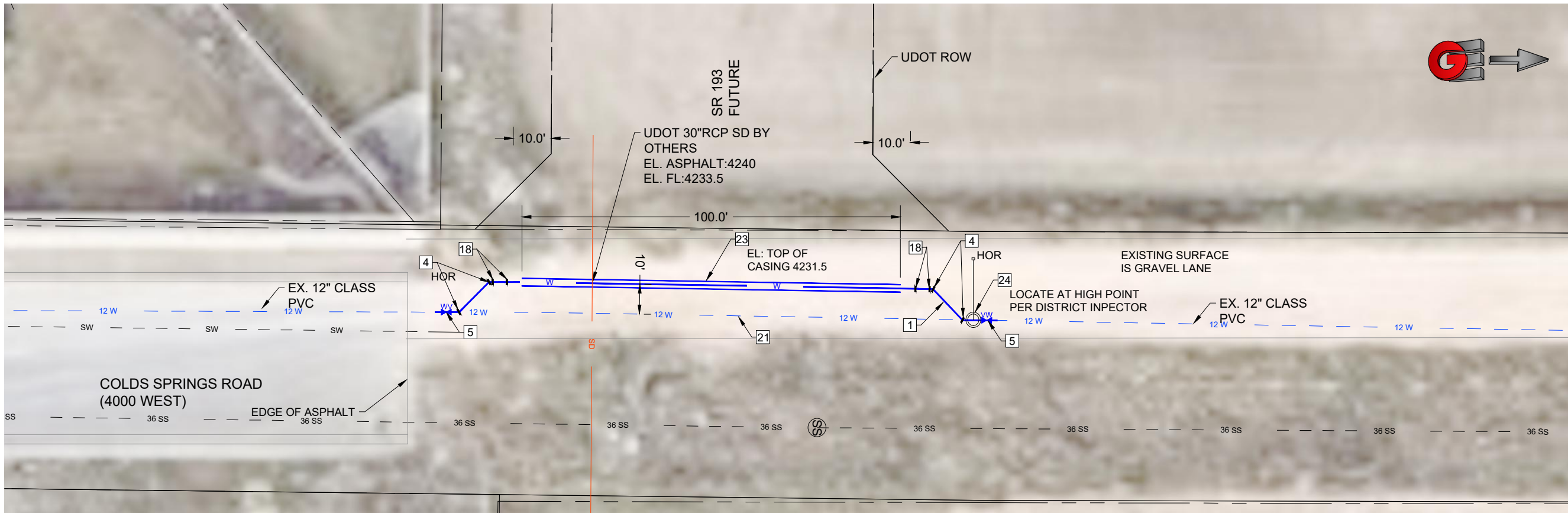
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2 NEW 1" SERVICE LONG SIDED W/ 2" SLEEVE	7 NEW CONNECT TO EXISTING 8" AT 625 S, STA 5+22	15 ABANDON VALVE BELOW GRADE	23 SR 193 CROSSING - 24" STEEL CASING	30 2" MILL AND FILL
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	13 NEW FIRE HYDRANT ASSEMBLY	21 FLOW FILL ABANDON LINE		

Scale in Feet  
1" = 30'

<b>GARDNER ENGINEERING</b> CIVIL • LAND PLANNING MUNICIPAL • LAND SURVEYING 5150 SOUTH 375 EAST OGDEN, UT OFFICE: 801.476.0202 FAX: 801.476.0066	<b>P+P 7</b>		<b>HOOPER WATER I.D.</b>		<b>#162-4500W; 700S TO 200S</b>		<b>WEST POINT CITY, DAVIS, UTAH</b>	
	Date: 9/7/2022		Scale: 1" = 30'		Designed: MDD		Drafted: MDD	
	Revisions		Description		Checked: DLW			
	Date							
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R:\0813 - HWID\2106 - WO#162 4500 W 700 S TO 200 S\DESIGN\DWG\2106 - 4500 W WATERLINE SHEETS\_RECOVER.DWG



KEYNOTES:

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Date:	9/7/2022
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Designed:	MDD
Drafted:	MDD
Checked:	DLW

Revisions	Date	Description



P 8
HOOPER WATER I. D.
#162-4500W; 700S TO 200S
WEST POINT CITY, DAVIS, UTAH



C8
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### Hooper Water Improvement District Standard Details Revision Summary

Date	Detail No.	Description
2018/10/24		Standard Details DWG approval
2018/10/12	4	Add requirement to cap lateral stub
2018/10/12	5	Add note to ensure thrust block does not block drain holes
2018/10/12	6	Standpipe detail: add note requiring 3" screen overlap
2018/11/16	15	Change Note 5 to mimic DDW rule language
2019/02/13	2	Add valve size and location std.
2019/02/13	6	Air/Vac Valve Detail: add note for PEX pipe transition to reduce stress
2019/02/13	16	Change detail to require horizontal brass nipple beyond curbstop
2019/11/18	4	Add requirements for meter box in traffic areas
2019/11/18	8	Add multiple meter manifold detail
2020/03/17	4	Change detail to call for SDR 9 lateral and no couplings
2020/03/17	9	Change detail to call for SDR 9 lateral and no couplings
2020/03/17	10	Change detail to call for SDR 9 lateral and no couplings
2020/03/17	11	Change detail to call for SDR 9 lateral and no couplings
2020/03/17	8	Change detail to call for SDR 9 lateral; 8 meter maximum
2021/04/23	5	Add Concrete collar requirement to Snake Pit
2021/09/24	16	18" Square concrete pad
2021/12/07	3A	Non-ROW, perpetual transmission lines shall be HDPE
2021/12/07	4	Meter Tags required when boxes are close

TABLE OF BEARING AREAS IN SQ. FT. FOR CONCRETE THRUST BLOCKING

SIZE	BENDS				TEES*	GATE VALVES	DEAD ENDS	CROSSW/BRANCH PLUGGED	CROSSW/2 BRAN. PLUGGED
	90°	45°	22 1/2°	11 1/2°					
3	1.0	0.0	0.3	0	0.7	0.5	0.7	0.7	0.7
4	1.8	1.0	0.5	0	1.3	0.5	1.3	1.3	1.3
6	4.0	2.2	1.1	0	2.8	0.7	2.8	2.8	2.8
8	7.1	3.8	2.0	1.0	5.0	2.4	5.0	5.0	5.0
10	11.1	6.0	3.0	1.5	7.8	4.5	7.8	7.8	7.8
12	16.0	8.6	4.4	2.2	11.3	7.3	11.3	11.3	11.3
14	21.7	11.8	6.0	3.0	15.4	11.0	15.4	15.4	15.4
15	25.0	13.5	7.0	3.5	17.6		17.6	17.6	17.6
16	28.4	15.3	8.0	4.0	20.0		20.0	20.0	20.0
18	36.0	19.4	10.0	5.0	25.4		25.4	25.4	25.4
20	44.2	24.0	12.2	6.1	31.4		31.4	31.4	31.4
21	48.0	26.5	13.5	6.8	34.6		34.6	34.6	34.6
22	54.0	29.0	14.8	7.4	38.0		38.0	38.0	38.0
24	64.0	34.5	17.7	8.8	45.0		45.0	45.0	45.0
30	100.0	54.0	27.6	13.8	71.0		71.0	71.0	71.0
36	144.0	78.0	40.0	20.0	102.0		102.0	102.0	102.0

\*SIZE IS BRANCH SIZE.

FOR 100 P.S.I. INTERNAL STATIC PRESSURE AND 1000 LBS. PER SQ. FT. SOIL BEARING CAPACITY.

## 1 THRUST BLOCK DETAIL

APPLIES TO ALL PRESSURE PIPE

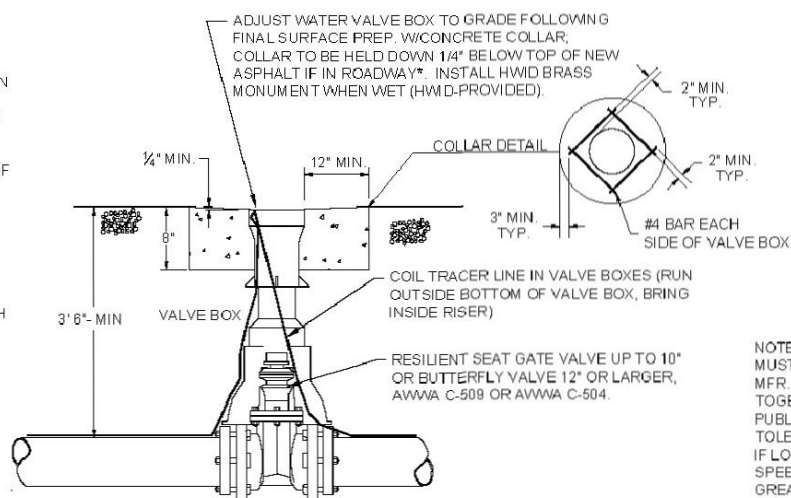
NTS

### VALVE LOCATION STANDARD:

AT TEES AND CROSSES, A VALVE SHALL BE INSTALLED IN EACH MAIN LINE, OUT OF THE INTERSECTION, AT THE EXTENSION OF PROPERTY LINES.

AN EXCEPTION TO THE NUMBER OF VALVES MAY BE MADE BY THE DISTRICT WHEN FOLLOWING THE STANDARD WILL PUT MAIN LINE VALVES WITHIN 250' OF EACH OTHER.

AN ISOLATION VALVE SHALL BE INSTALLED IN MAIN LINES ON EACH END OF AN EASEMENT THROUGH PRIVATE PROPERTY.



NOTE: VALVE BOX, RISER AND LID MUST COME FROM THE SAME MFR., BE INTENDED FOR USE TOGETHER AND SHALL BE WITHIN PUBLISHED DIMENSION TOLERANCES. IF LOCATED IN ROADWAY W/ SPEED LIMIT OF 40 MPH OR GREATER, LID SHALL BE HEAVY AND EXTRA DEEP.

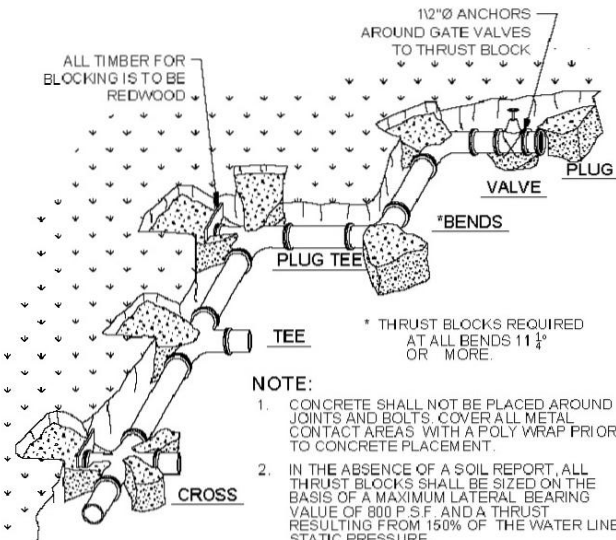
## 2 TYPICAL VALVE DETAIL

NTS

DRAFTED: MDD  
DESIGNED: DW  
CHECKED: CA  
DATE: 4/2018  
REV 1: 02/13/2019 VALVE SIZE AND LOCATION  
REV 2:  
REV 3:



STANDARD WATER DETAILS  
HOOPER WATER IMPROVEMENT DISTRICT  
THRUST BLOCK  
TYPICAL VALVE  
SHEET 1



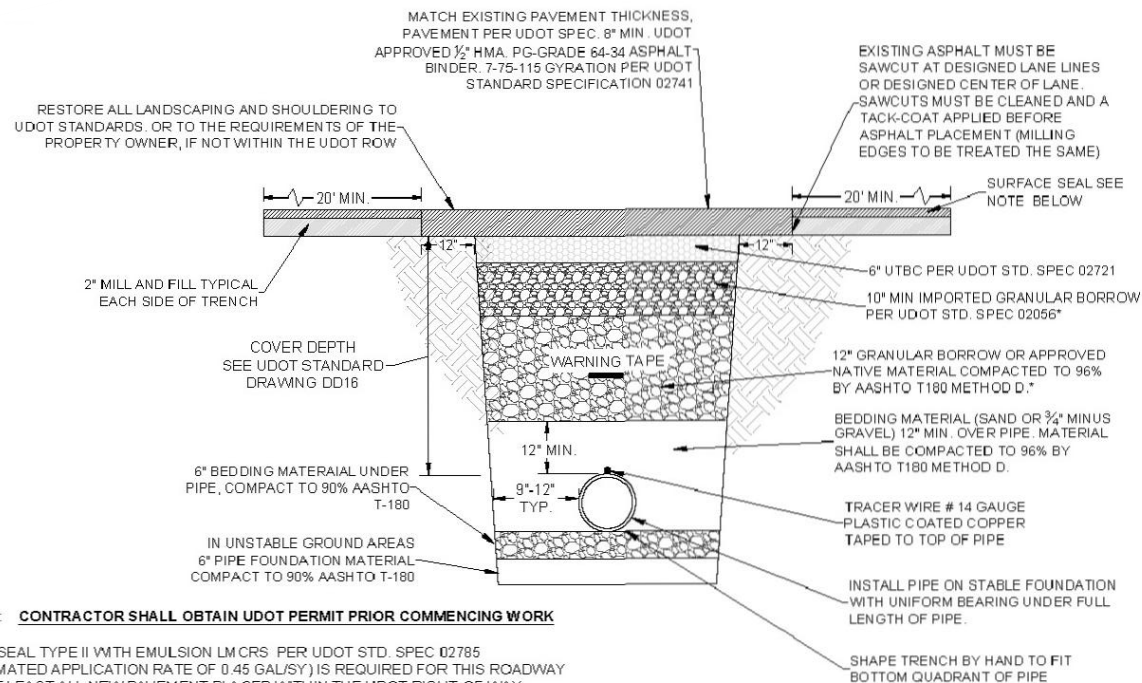
\*ALL VALVES, TEES, CROSSES AND BENDS SHALL ALSO BE FITTED WITH MECHANICAL RESTRAINTS, SUCH AS MEGA LUG OR ROMA GRIP WITH FLUOROPOLYMER COATED BOLTS AND NUTS.

AREAS GIVEN IN TABLE ARE BASED UPON AN INTERNAL STATIC PRESSURE OF 100 P.S.I. AND A SOIL BEARING CAPACITY OF 1000 LBS. PER SQ. FT. BEARING AREAS FOR ANY PRESSURE AND SOIL BEARING CAPACITY MAY BE OBTAINED BY MULTIPLYING THE TABULATED VALUES BY A CORRECTION FACTOR 'F'.

F = ACTUAL SPECIFIED TEST PRESSURE IN HUNDREDS OF LBS./SQ. IN.  
ACTUAL SOIL BEARING CAPACITY IN THOUSANDS OF LBS.

EXAMPLE: TO FIND BEARING AREA FOR 8" 90° BEND WITH A STATIC INTERNAL PRESSURE OF 150 P.S.I. AND WITH A SOIL BEARING CAPACITY OF 3000 LBS. PER SQ. FT.  
F = 1.5 / 3.0 = 0.5  
TABULATED VALUE = 7.1 SQ. FT.  
0.5 X 7.1 = 3.56 ~ 4 SQ. FT. (~OR 2 FT. LONG BY 2 FT. HIGH.)

NOTE:  
• WATER & SEWER LINES SHALL BE INSTALLED A MINIMUM OF 10 HORIZONTAL FEET FROM EACH OTHER.  
• WHERE A WATER MAIN AND A SEWER MAIN MUST CROSS, THE WATER MAIN SHALL BE AT LEAST 18" ABOVE THE SEWER MAIN.  
• SEPARATION DISTANCES ARE TO BE MEASURED EDGE-TO-EDGE.  
• WATER MAINS SHALL NOT BE INSTALLED IN THE SAME TRENCH WITH EITHER SEWER OR SECONDARY PIPES.  
• ALL NON-ROW WATERLINES INTENDED FOR PERPETUAL TRANSMISSION LINE W/O SERVICE TAPS SHALL BE HDPE. CONSULT DISTRICT.  
• IF THESE STANDARDS CANNOT BE MET, CONTACT THE DISTRICT INSPECTOR, WHO MAY THEN CONTACT THE DISTRICT ENGINEER.



NOTE: CONTRACTOR SHALL OBTAIN UDOT PERMIT PRIOR COMMENCING WORK

CHIP SEAL TYPE II WITH EMULSION LM CRS. PER UDOT STD. SPEC 02785 (ESTIMATED APPLICATION RATE OF 0.45 GAL/SY) IS REQUIRED FOR THIS ROADWAY ON AT LEAST ALL NEW PAVEMENT PLACED WITHIN THE UDOT RIGHT-OF-WAY.

ALL CONSTRUCTION WITHIN THE UDOT RIGHT-OF-WAY SHALL CONFORM TO THE MOST CURRENT UDOT STANDARD DRAWING AND SPECIFICATIONS, FOUND AT UDOT.UTAH.GOV/GO/2017 STANDARDS.

## 3B UDOT CROSSING TRENCH DETAIL

NTS

DRAFTED: MDD  
DESIGNED: DW  
CHECKED: CA  
DATE: 4/2018  
REV 1: 2021/12/10 NON-ROW HDPE  
REV 2:  
REV 3:



STANDARD WATER DETAILS  
HOOPER WATER IMPROVEMENT DISTRICT  
TYPICAL TRENCH SECTION  
UDOT CROSSING TRENCH DETAIL  
SHEET 2



### DETAILS

HOOPER WATER I.D.

#162-4500W; 700S TO 200S

WEST POINT CITY, DAVIS, UTAH

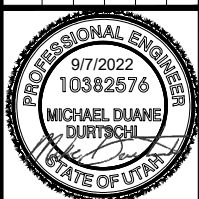
**GARDNER ENGINEERING**  
CIVIL • LAND PLANNING  
MUNICIPAL • LAND SURVEYING

5150 SOUTH 375 EAST OGDEN, UT  
OFFICE: 801.476.0202 FAX: 801.476.0066

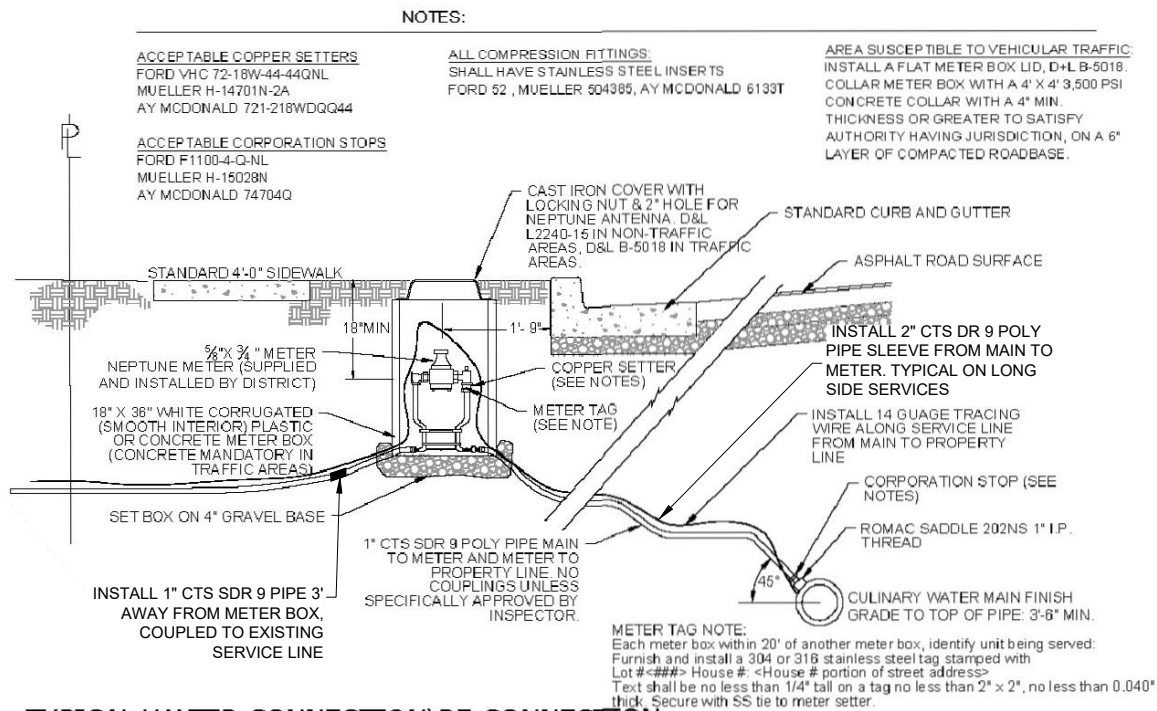
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Date: 9/7/2022  
Scale: #####  
Designed: MDD  
Drafted: MDD  
Checked: DLW

Revisions  
Date  
Description

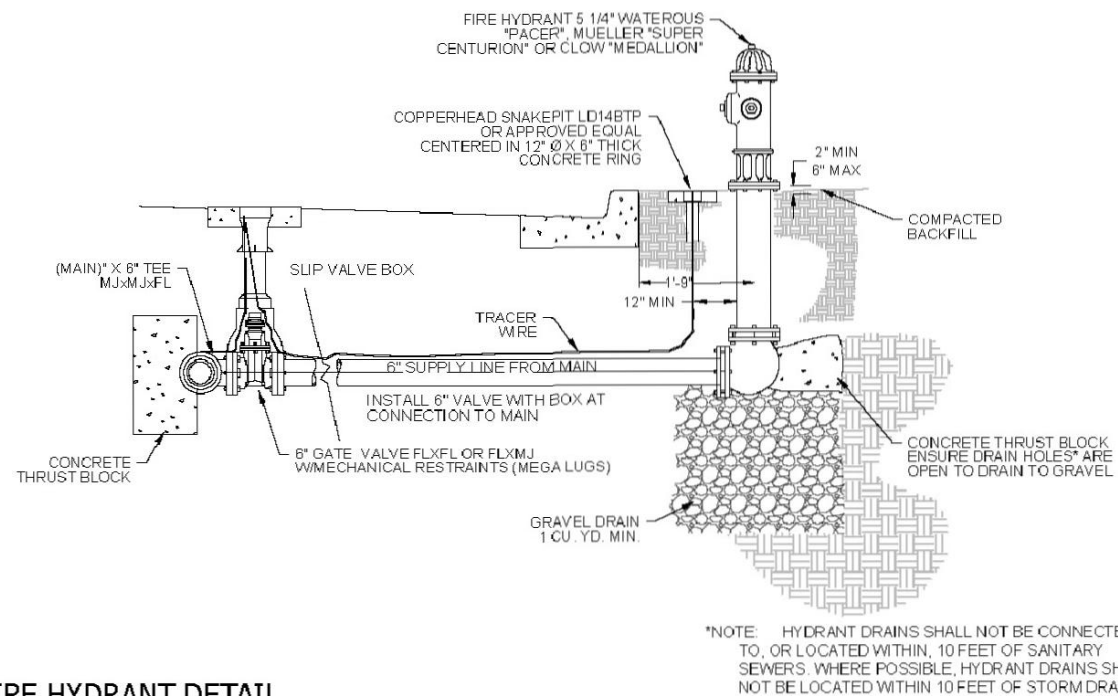






4 TYPICAL WATER CONNECTION/RE-CONNECTION

NTS



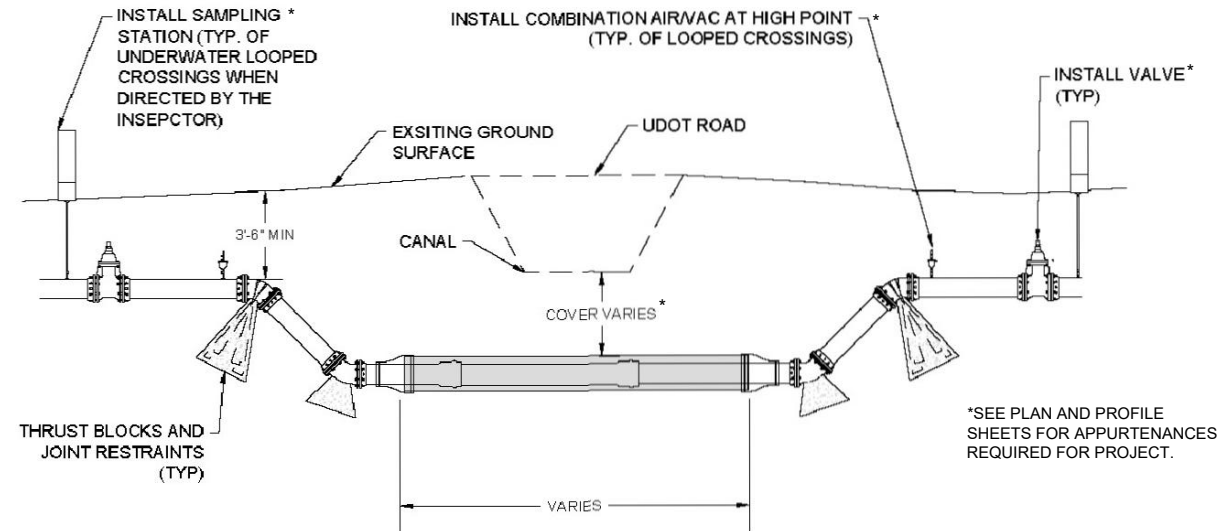
5 FIRE HYDRANT DETAIL

NTS

COVER (MIN.)	
LAYTON CANAL	4'-0"
HOOPER CANAL	2'-0"
WILSON CANAL	2'-0"
SLOUGH	2'-0"
UDOT ROAD	SEE UDOT STD DWG DD16

PIPE SIZE	CASING SIZE*
8"	16"
10"	18"
12"	24"
14"	30"
16"-20"	30"

\* CASING WALL THICKNESS (0.375") TYPICAL



- NOTE:
- CASINGS REQUIRE CENTRALIZING SPACERS AND END SEALS W/ S.S. BAND CLAMPS SUBMITTED TO INSPECTOR FOR APPROVAL PRIOR TO INSTALLATION. PVC PIPE REQUIRES SELF- RESTRAINING GASKETS ON PIPE JOINTS INSIDE OF CASING AND ONE PIPE JOINT EACH SIDE OF CASING.
  - ISOLATION VALVE INSTALLATION IS REQUIRED ON EACH SIDE OF CASING.
  - COMBINATION AIR/VAC VALVE INSTALLATION IS REQUIRED ON EACH SIDE OF LOOPED CROSSINGS.
  - INSTALLATION OF A SAMPLING TAP OR OTHER ACCEPTABLE MEANS OF SAMPLING WILL BE REQUIRED TO ALLOW FOR REPRESENTATIVE WATER QUALITY TESTING ON THE UPSTREAM AND DOWNSTREAM SIDE OF THE CROSSING. IF THE DISTRICT INSPECTOR DETERMINES THAT ANOTHER MEANS OF SAMPLING DOES NOT EXIST NEAR THE GIVEN LOCATION.
  - CROSSINGS SHALL BE COMMISSIONED AS AN INTEGRAL PART OF THE SURROUNDING PIPE SYSTEM (FLUSH, DISINFECT, PRESSURE TEST).

15 CANAL/UDOT CROSSING DETAIL

DRAFTED: MDD  
DESIGNED: DW  
CHECKED: CA  
DATE: 4/2018  
REV 1: 10/12/2018  
REV 2: 11/18/2019  
REV 3: 2020/03/20  
REV 4: 2021/04/23  
REV 5: 2021/12/07 METER TAG



STANDARD WATER DETAILS  
HOOPER WATER IMPROVEMENT DISTRICT  
TYPICAL WATER CONNECTION DETAIL  
FIRE HYDRANT DETAIL

SHEET 3

**GARDNER ENGINEERING**  
CIVIL - LAND PLANNING  
MUNICIPAL - LAND SURVEYING  
5150 SOUTH 375 EAST OGDEN, UT  
OFFICE: 801.476.0202 FAX: 801.476.0066

DRAFTED: MDD  
DESIGNED: DW  
CHECKED: CA  
DATE: 4/2018  
REV 1: 10/12/2018 NOTES 4-5; SAMPLING STATIONS  
REV 2: 11/18/2019 NOTE 5; STATION LOCATIONS  
REV 3:



STANDARD WATER DETAILS  
HOOPER WATER IMPROVEMENT DISTRICT  
CANAL/UDOT CROSSING DETAIL

SHEET 12

**GARDNER ENGINEERING**  
CIVIL - LAND PLANNING  
MUNICIPAL - LAND SURVEYING  
5150 SOUTH 375 EAST OGDEN, UT  
OFFICE: 801.476.0202 FAX: 801.476.0066

Date: 9/7/2022	Scale: #####	Designed: MDD	Drafted: MDD	Checked: DLW
Revisions	Description			
Date				

PROFESSIONAL ENGINEER  
9/7/2022  
10382576  
MICHAEL DUANE  
DURTSCHI  
STATE OF UTAH

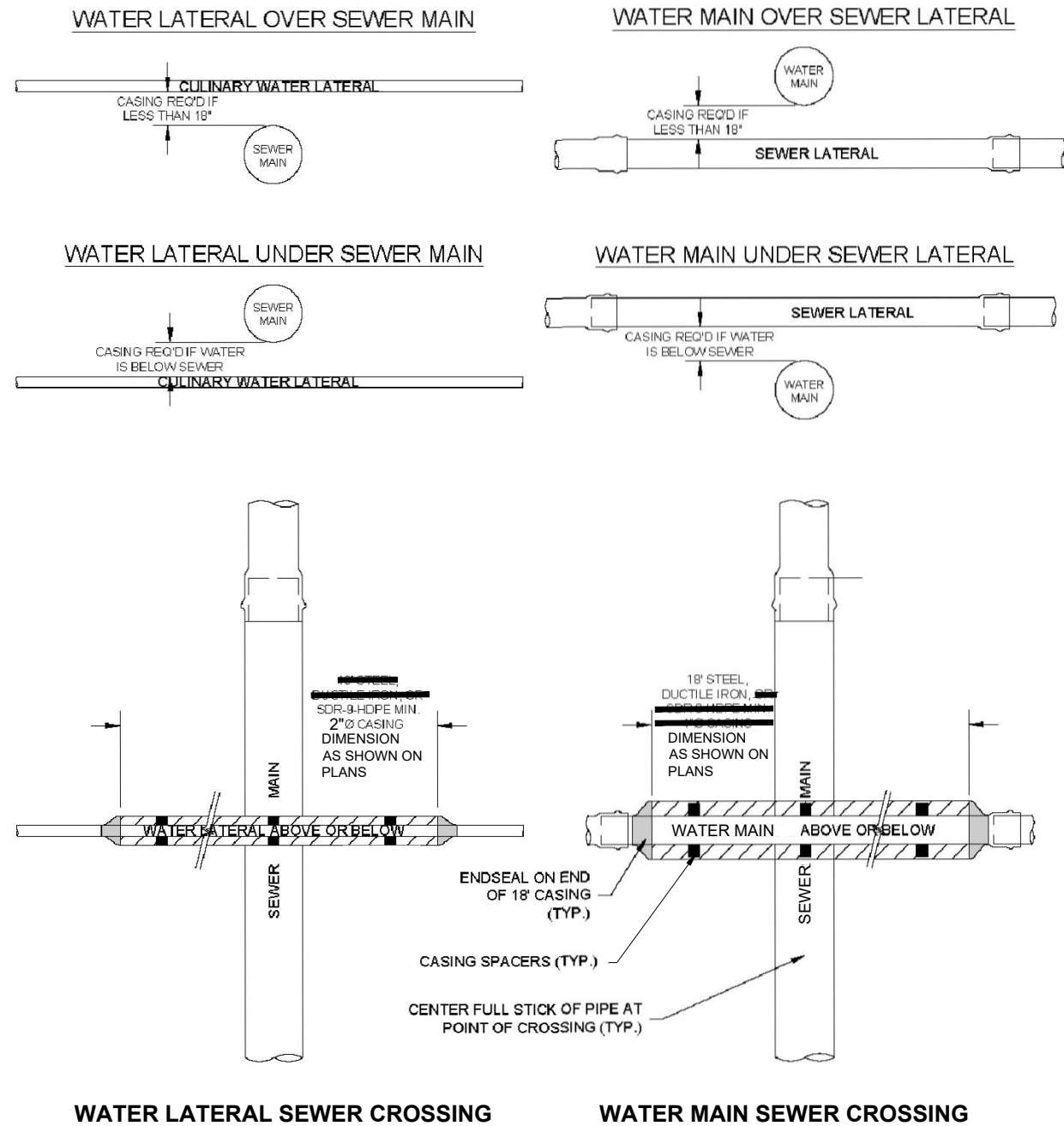
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D2  
14



R:\0813 - HWID\2106 - WO#162 4500 W 700 S TO 200 S\DESIGN\DWG\2106 - 4500 W WATERLINE SHEETS\_RECOVER.DWG



17 SEWER/WATER VERTICAL SEPARATION EXCEPTION DETAIL

NTS

DRAFTED: MDD	DEVIATIONS FROM STANDARDS MUST BE
DESIGNED: DW	APPROVED BY HOOPER WATER
CHECKED: CA	IMPROVEMENT DISTRICT.
DATE: 4/2018	
REV1: 6/21/2021- DETAIL 17, SEPARATION EXCEPTION	
REV2:	
REV3:	



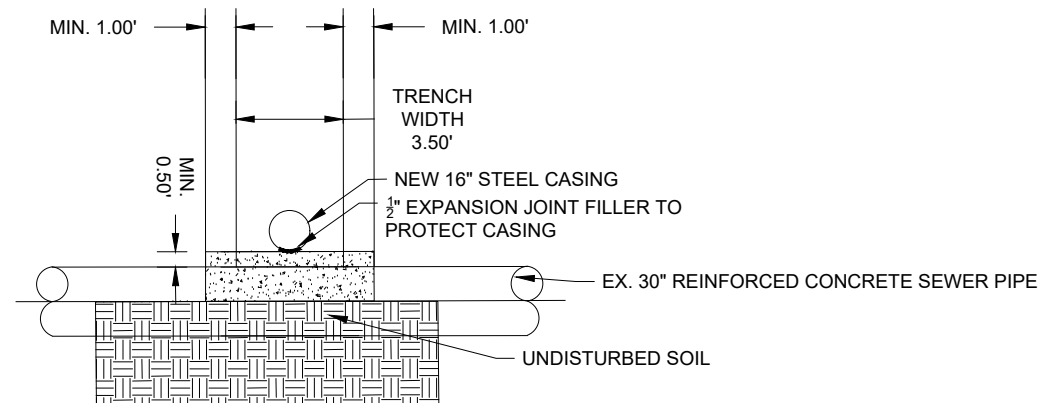
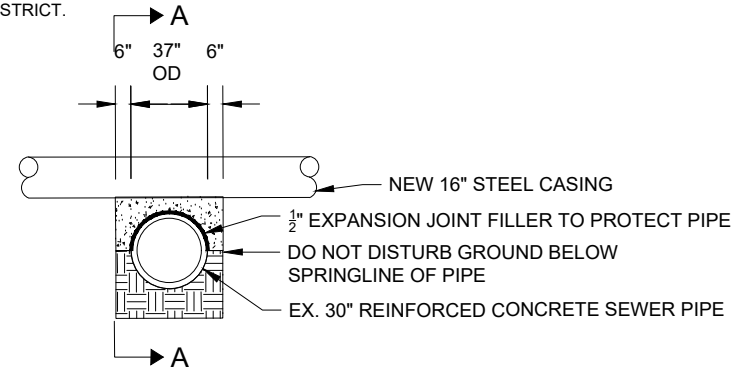
STANDARD WATER DETAILS
HOOPER WATER IMPROVEMENT DISTRICT
SEWER/WATER CROSSING

SHEET 14



NOTES:

1. PRIOR TO CONSTRUCTION CONTACT NORTH DAVIS SEWER DISTRICT - 801-825-0712 FOR INSPECTION.
2. INSTALL #15 FELT OR NEOPRENE WATERSTOP AROUND NEW WATER PIPE PRIOR TO THE POUR OF CONCRETE ENCASEMENT TO PREVENT BONDING.
3. BACKFILL TO BE BROUGHT UP UNIFORMLY ON BOTH SIDES OF CONC. SUPPORT.
4. CONCRETE SHALL BE TYPE II/V PORTLAND CEMENT PER ASTM C150 WITH A MINIMUM COMPRESSIVE STRENGTH OF 300 PSI PER ASTM C39. NO ADDITIVES SHALL BE PERMITTED WITHOUT PRIOR APPROVAL BY THE DISTRICT.



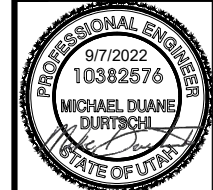
SECTION A-A

18 SEWER CROSSING STRUCTURAL SUPPORT

NTS

Revisions	Date	Description

Date: 9/7/2022
Scale: #####
Designed: MDD
Drafted: MDD
Checked: DLW



DETAILS

HOOPER WATER I.D.

#162-4500W; 700S TO 200S

WEST POINT CITY, DAVIS, UTAH

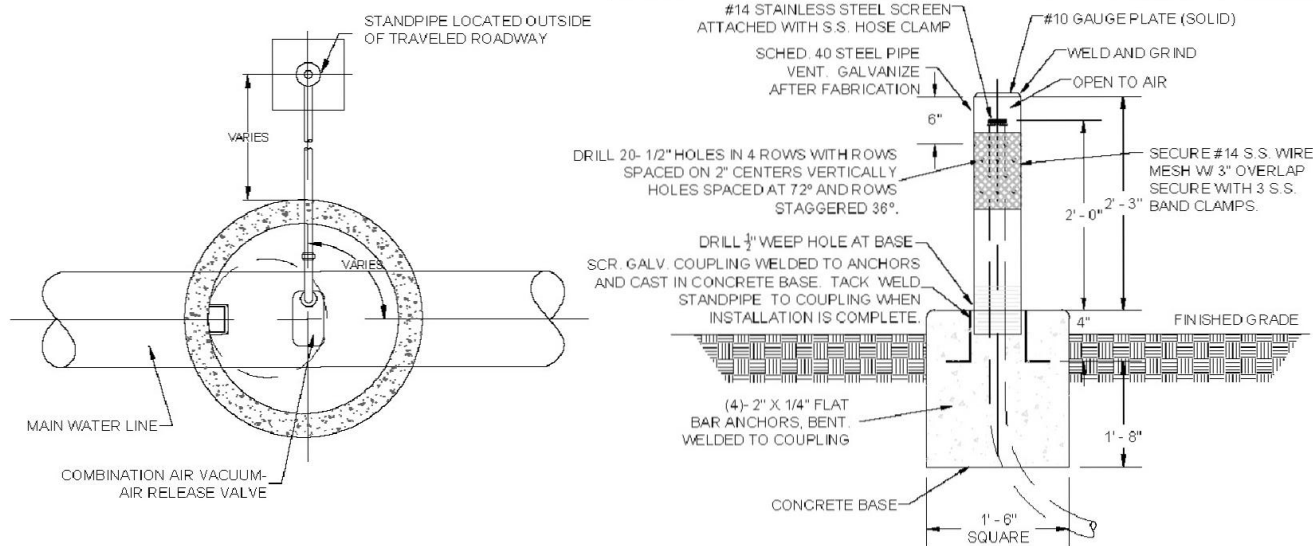


D3

14



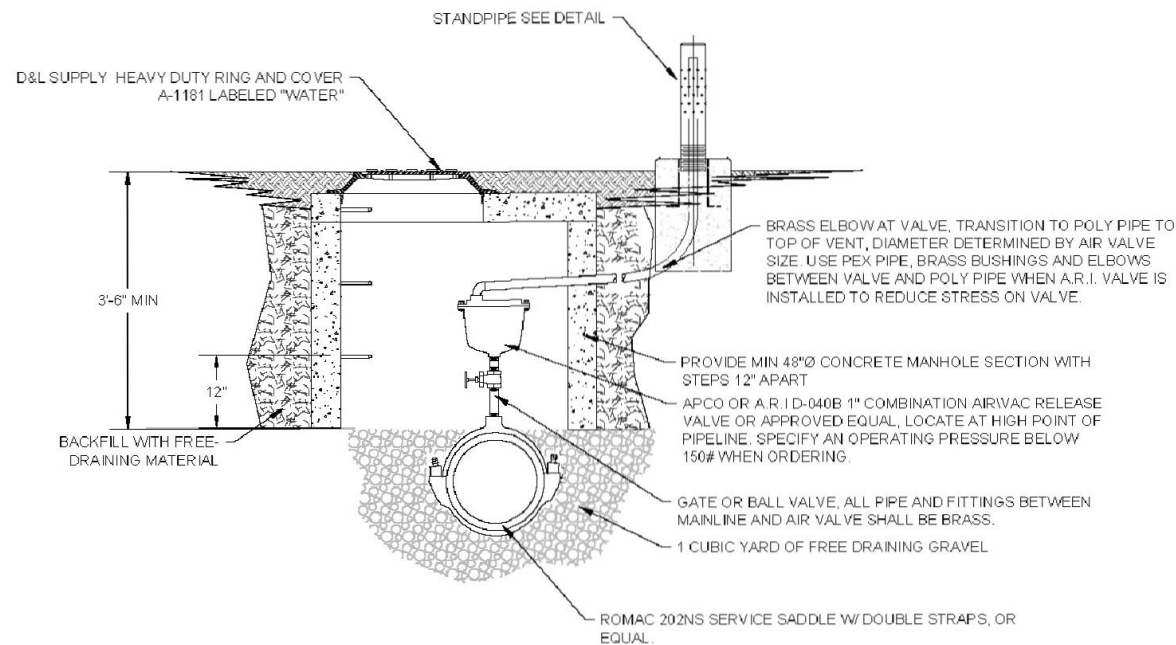
R:\0813 - HWID\2106 - WO#162 4500 W 700 S TO 200 S\DESIGN\DWG\2106 - 4500 W WATERLINE SHEETS\_RECOVER.DWG



AIR VALVE PLAN VIEW  
NTS

STANDPIPE DETAIL  
NTS

NOTES:  
1. LOCATE STANDPIPE WELL OUTSIDE TRAVELED ROADWAY OR AS DIRECTED BY THE ENGINEER. INSTALL 4" STEEL PIPE FOR A 1" AIR VAC/AIR RELEASE VALVE AND 6" STEEL PIPE FOR A 2" VALVE.



AIR/VAC VALVE DETAIL  
NTS

## COMBINATION AIR/VAC VALVE DETAILS

NTS

DRAFTED: MDD	DEVIATIONS FROM STANDARDS MUST BE
DESIGNED: DW	APPROVED BY HOOPER WATER
CHECKED: CA	IMPROVEMENT DISTRICT.
DATE: 4/2018	
REV 1: 10/12/2018 MODIFY BAND CLAMP NOTE	
REV 2: 02/13/2019 PEX AT AIR VALVE NOTE	
REV 3:	



STANDARD WATER DETAILS
HOOPER WATER IMPROVEMENT DISTRICT
COMBINATION AIR/VAC VALVE DETAIL
SHEET 4



## DETAILS

HOOPER WATER I. D.

#162-4500W; 700S TO 200S

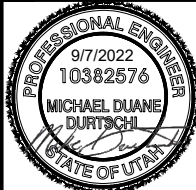
WEST POINT CITY, DAVIS, UTAH



CIVIL • LAND PLANNING  
MUNICIPAL • LAND SURVEYING  
5150 SOUTH 375 EAST OGDEN, UT  
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D4

14



Revisions	Date	Description

Date: 9/7/2022
Scale: #####
Designed: MDD
Drafted: MDD
Checked: DLW