

- EXISTING FACILITY KEYNOTES**
- ① EXISTING TREE TO REMAIN.
  - ② EXISTING POWER/TELEPHONE POLE TO REMAIN.
  - ③ EXISTING A.C. PAVEMENT TO REMAIN.
  - ④ EXISTING SIGN TO REMAIN.
  - ⑤ EXISTING DRIVEWAY TO REMAIN.
  - ⑥ EXISTING FENCE TO REMAIN.
  - ⑦ EXISTING FIRE HYDRANT TO ABANDONED WHEN NEW LINE IS IN SERVICE. (PROTECT IN PLACE UNTIL NEW FIRE HYDRANT IS IN OPERATION). DISTRICT TO REMOVE.
  - ⑧ EXISTING WATER METER TO REMAIN.
  - ⑨ EXISTING GUY WIRE TO REMAIN.
  - ⑩ EXISTING 6-INCH WATER VALVE TO REMAIN.
  - ⑪ EXISTING WATER LINE TO REMAIN.
  - ⑫ EXISTING WATER LINE TO BE CAPPED AND ABANDONED IN PLACE BY CONTRACTOR AFTER NEW PIPELINE IS IN SERVICE.
  - ⑬ CAUTION - EXISTING AT&T UNDERGROUND PIPELINE TO REMAIN.
  - ⑭ EXISTING UTILITY BOX TO REMAIN.
  - ⑮ CAUTION - EXISTING OVERHEAD ELECTRICAL LINES.
  - ⑯ EXISTING BUILDING TO REMAIN.
  - ⑰ EXISTING EDGE OF PAVEMENT TO REMAIN.
  - ⑱ EXISTING 2-INCH WATER VALVE TO REMAIN.

- DEMOLITION KEYNOTES:**
- ① SAWCUT OR GRIND OUT THE EXISTING A.C. PAVEMENT FOR THE FULL DEPTH OF THE A.C. PAVEMENT. REMOVE AND DISPOSE OF THE EXISTING A.C. PAVEMENT AND UNDERLYING MATERIAL TO SUBBASE DESIGN GRADE.
  - ② SAWCUT THE EXISTING ASPHALT DRIVEWAY FOR THE FULL DEPTH OF THE ASPHALT. REMOVE AND DISPOSE OF THE EXISTING ASPHALT AND UNDERLYING MATERIAL TO SUBBASE DESIGN GRADE.
- NOTE:**
1. ALL EXISTING DRY AND WET UTILITIES ILLUSTRATED ARE APPROXIMATE. ALL UTILITIES CROSSING THE PROPOSED WATER LINE SHALL BE REQUIRED TO BE POT-HOLED. SEE NOTE 2.
  2. IT WILL BE REQUIRED TO POT-HOLE THE EXISTING UNDERGROUND UTILITIES WITHIN THE LIMITS OF CONSTRUCTION WITHIN FIVE (5) DAYS FROM THE ISSUANCE OF THE NOTICE TO PROCEED. IT WILL BE REQUIRED TO COORDINATE THE POT-HOLING ACTIVITIES WITH THE UTILITY COMPANIES AND ENGINEER. IT WILL BE VERIFIED THAT THE EXISTING UTILITIES ARE LOCATED BELOW OR ABOVE THE PROPOSED NEW 6-INCH WATER PIPELINE. RELOCATION OF THE UTILITIES WILL BE COORDINATED WITH THE UTILITY COMPANY. THERE ARE EXISTING UNDERGROUND TELEPHONE CABLE, WATER, GAS, ELECTRICAL, COMMUNICATION, AND IRRIGATION UTILITIES. IT WILL BE REQUIRED TO POTHOLE AND EXPOSE THE UTILITIES PRIOR TO THE EXCAVATION OF THE NEW 6-INCH WATER PIPELINE. THE CONSTRUCTION MANAGER/INSPECTOR WILL OBSERVE THE UTILITIES DURING THE POT-HOLE EXCAVATION WORK. THE CONSTRUCTION MANAGER/INSPECTOR SHALL OBTAIN THE ELEVATION OF THE EXPOSED UTILITY AND VERIFY THAT THE UTILITY DOES NOT CONFLICT WITH THE WATER PIPELINE GRADE AS ILLUSTRATED ON THE PROFILE DRAWING.
  3. THE CONSTRUCTION MANAGER/INSPECTOR SHALL AS-BUILT ALL UTILITIES ENCOUNTERED DURING THE CONSTRUCTION ACTIVITIES. THE AS-BUILT DRAWING SHALL INCLUDE THE HORIZONTAL STATION, TOP OF UTILITY ELEVATION, UTILITY MATERIAL COMPOSITION, UTILITY DIMENSIONS OR DIAMETER AND THE TYPE OF UTILITY.
  4. THERE IS AN EXISTING EARTHEN BERM WHERE THE NEW PIPELINE WILL BE INSTALLED AT MULTIPLE LOCATIONS. CONTRACTOR TO RECONSTRUCT EARTHEN BERM AFTER THE INSTALLATION OF THE WATER MAIN PIPELINE.

- CONSTRUCTION KEYNOTES:**
- ① INSTALL NEW 8-INCH DIAMETER AWWA C-900, DR 18 - PRESSURE CLASS 150 PVC WATER PIPELINE IN NATIVE AREAS PER TRENCH DETAIL "WP-02" ON SHEET 8 AND WARNING/IDENTIFICATION TAPE AND TRACER WIRE DETAIL "WP-01" ON SHEET 8.
  - ② INSTALL NEW 8-INCH DIAMETER AWWA C-900 DR 18 - PRESSURE CLASS 150 PVC WATER PIPELINE IN PAVED AREAS PER TRENCH DETAIL "G-24A AND G-24B" ON SHEET 8 AND WARNING/IDENTIFICATION TAPE AND TRACER WIRE DETAIL "WP-01" ON SHEET 8.
  - ③ INSTALL NEW 8-INCH X 8-INCH X 8-INCH X 8-INCH DIAMETER FLANGED EPOXY COATED DUCTILE IRON CROSS WITH P.C.C. THRUST BLOCK. SEE CONCRETE THRUST AND ANCHOR BLOCK INSTALLATION DETAIL "WT-01" ON SHEET 9.
  - ④ INSTALL NEW 8-INCH X 8-INCH X 8-INCH DIAMETER FLANGED EPOXY COATED DUCTILE IRON TEE WITH P.C.C. THRUST BLOCK. SEE CONCRETE THRUST AND ANCHOR BLOCK INSTALLATION DETAIL "WT-01" ON SHEET 9.
  - ⑤ INSTALL NEW 6-INCH FIRE HYDRANT ASSEMBLY PER DETAIL "WF-01" ON SHEET 8.
  - ⑥ INSTALL NEW 6-INCH DIAMETER FLANGED X MJ DUCTILE IRON RESILIENT WEDGE GATE VALVE WITH RESTRAINED JOINT FITTINGS AND VALVE COVER AND RISER. SEE DETAIL "WV-02" ON SHEET 9.
  - ⑦ INSTALL NEW 8-INCH DIAMETER FLANGED X MJ DUCTILE IRON RESILIENT WEDGE GATE VALVE WITH RESTRAINED JOINT FITTINGS AND VALVE COVER AND RISER. SEE DETAIL "WV-02" ON SHEET 9.
  - ⑧ INSTALL 2-INCH BLOW-OFF ASSEMBLY, 6-INCH BLIND FLANGE, THRUST BLOCK. SEE DETAIL ON SHEET 9.
  - ⑨ INSTALL NEW 4-INCH DIAMETER EPOXY COATED DUCTILE IRON TRANSITION COUPLING ADAPTER WITH STAINLESS STEEL HARDWARE.
  - ⑩ INSTALL NEW 4-INCHES OF A.C. PAVEMENT OVER 9-INCHES OF CLASS 2 BASE MATERIAL. COMPACT THE CLASS 2 BASE MATERIAL TO 95 PERCENT OF MAXIMUM DENSITY PER ASTM D-1557.

- CONSTRUCTION KEYNOTES:**
- ⑪ INSTALL 1-INCH WATER LATERAL INCLUDING CONNECTION TO 6-INCH WATER MAIN, 1-INCH COPPER PIPE TO PROPERTY LINE AND 1-INCH BRONZE ANGLE METER STOP WITH LOCKWING. USE DIRECTION DRILL TO INSTALL PIPE UNDER PAVED AREAS. (WATER METER, METER BOX, AND SHUT OFF VALVE TO BE PROVIDED AND INSTALLED BY THE DISTRICT). LOCATION TO BE DETERMINED BY THE DISTRICT.
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  - ⑬ INSTALL FLANGE X FLANGE 8" X 6" DUCTILE IRON REDUCER FITTING.
  - ⑭ INSTALL FLANGE X MJ 6" X 4" DUCTILE IRON REDUCER FITTING.
  - ⑮ INSTALL 6-INCH DUCTILE IRON BLIND FLANGE AND PCC THRUST BLOCK.
  - ⑯ INSTALL NEW 6-INCH X 6-INCH X 6-INCH DIAMETER FLANGED EPOXY COATED DUCTILE IRON TEE WITH P.C.C. THRUST BLOCK. SEE CONCRETE THRUST AND ANCHOR BLOCK INSTALLATION DETAIL "WT-01" ON SHEET 9.
  - ⑰ CONNECT NEW 6-INCH PVC PIPE TO EXISTING 2-INCH SERVICE PIPE WITH A 2-INCH STAINLESS STEEL SADDLE. USE 2-INCH SCH. 40 PVC PIPE AND FITTINGS.
  - ⑱ INSTALL NEW 6-INCH DIAMETER AWWA C-900 DR 18 - PRESSURE CLASS 150 PVC WATER PIPELINE IN PAVED AREAS PER TRENCH DETAIL "G-24A AND G-24B" ON SHEET 8 AND WARNING/IDENTIFICATION TAPE AND TRACER WIRE DETAIL "WP-01" ON SHEET 8.
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  - ⑳ INSTALL FLANGE X MJ 8" X 6" DUCTILE IRON REDUCER FITTING.

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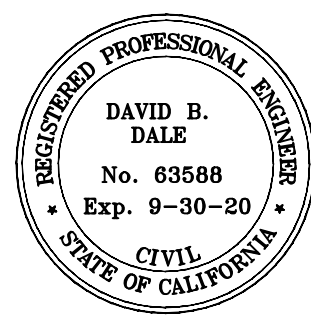
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APPROVED FOR CONSTRUCTION BY:

\_\_\_\_\_

DATE \_\_\_\_\_



PREPARED UNDER THE DIRECT SUPERVISION OF:

DAVID B. DALE, PE

69,121 R.C.E. NO.

06/30/20 REG. EXP.

**PROJECT TITLE:**  
BORRIGO WATER DISTRICT (CAPITAL IMPROVEMENTS PROJECTS)  
BENDING ELBOW, WEATHER VANE AND ROCKING CHAIR DRIVE  
WATER IMPROVEMENTS PROJECT

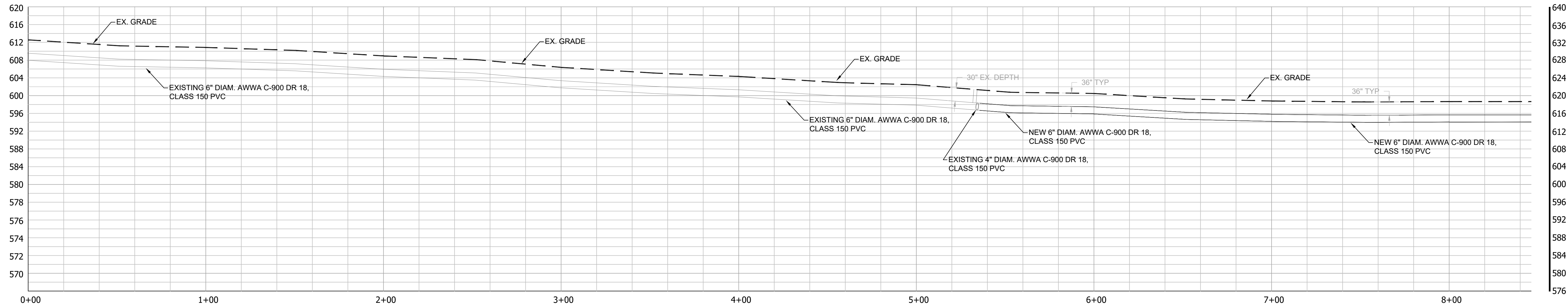
**SHEET CONTENT:**  
WATER IMPROVEMENT PLANS  
WEATHER VANE DR. STA 26+00 TO STA 33+06

SCALE: 1" = 30'

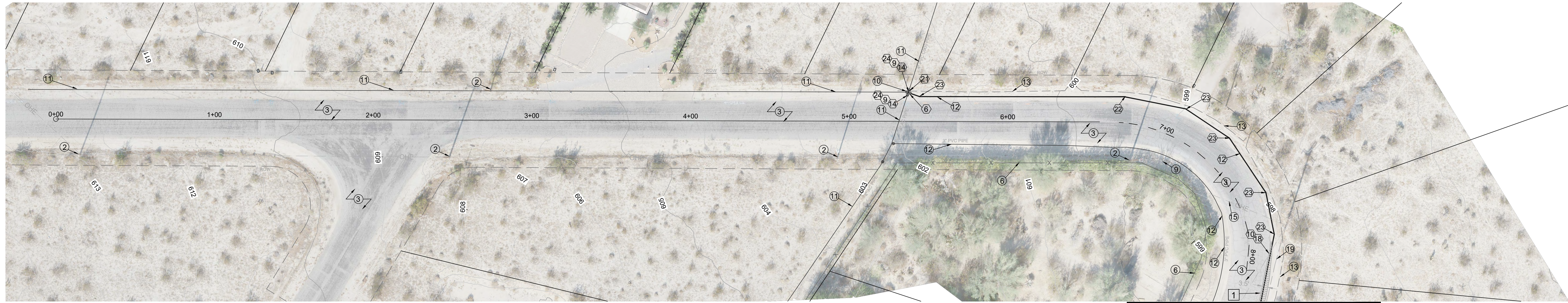
SHEET 6 OF 10 SHEETS

JOB NO. \_\_\_\_\_





VERTICAL SCALE: 1"=12'



HORIZONTAL SCALE: 1"=30'

STA 8+25 - MATCHLINE SEE SHEET 6

STA 26+00 - MATCHLINE SEE SHEET 6

**EXISTING FACILITY KEYNOTES:**

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- ⑱ EXISTING 2-INCH WATER VALVE TO REMAIN.
- ⑲ CAUTION - EXISTING UNDERGROUND ELECTRICAL LINES.

**DEMOLITION KEYNOTES:**

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- ② SAWCUT THE EXISTING ASPHALT DRIVEWAY FOR THE FULL DEPTH OF THE ASPHALT. REMOVE AND DISPOSE OF THE EXISTING ASPHALT AND UNDERLYING MATERIAL TO SUBBASE DESIGN GRADE.

**NOTE:**

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- ⑥ INSTALL NEW 6-INCH DIAMETER FLANGED X MJ DUCTILE IRON RESILIENT WEDGE GATE VALVE WITH RESTRAINED JOINT FITTINGS AND VALVE COVER AND RISER. SEE DETAIL "VV-02" ON SHEET 10.
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- ⑭ INSTALL FLANGE x MJ 6" x 4" DUCTILE IRON REDUCER FITTING.
- ⑮ INSTALL 6-INCH DUCTILE IRON BLIND FLANGE AND PCC THRUST BLOCK.
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- ⑲ REMOVE EXISTING DUCTILE IRON TEE. INSTALL NEW 6-INCH X 6-INCH X 6-INCH DIAMETER FLANGED EPOXY COATED DUCTILE IRON CROSS WITH P.C.C. THRUST BLOCK. SEE CONCRETE THRUST AND ANCHOR BLOCK INSTALLATION DETAIL "WT-01" ON SHEET 10.
- ⑳ INSTALL NEW MJxMJ 6-INCH DIAMETER 11.25 DEGREE DUCTILE IRON FITTING
- ㉑ INSTALL NEW MJxMJ 6-INCH DIAMETER 22.5 DEGREE DUCTILE IRON FITTING
- ㉒ INSTALL NEW 6-INCH DIAMETER FLANGED X MJ DUCTILE IRON RESILIENT WEDGE GATE VALVE WITH RESTRAINED JOINT FITTINGS AND VALVE COVER AND RISER. SEE DETAIL "VV-02" ON SHEET 10.

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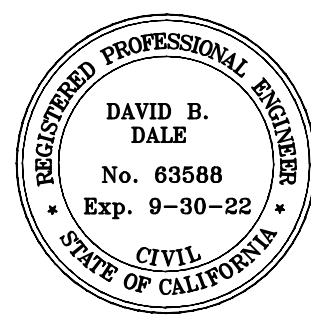
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R.C.E. NO. \_\_\_\_\_  
DATE \_\_\_\_\_  
REG. EXP. \_\_\_\_\_



PREPARED UNDER THE DIRECT SUPERVISION OF:

DAVID B. DALE, PE  
63,588  
R.C.E. NO. \_\_\_\_\_  
DATE \_\_\_\_\_  
REG. EXP. 09/30/22

**PROJECT TITLE:**  
BORREGO WATER DISTRICT (CAPITAL IMPROVEMENTS PROJECTS)  
BENDING ELBOW, WEATHER VANE, ROCKING CHAIR DRIVE,  
WALKING H AND DOUBLE O WATER IMPROVEMENTS PROJECT

**SHEET CONTENT:**  
WATER IMPROVEMENT PLANS  
WALKING H - STATION 0+00 TO 8+25

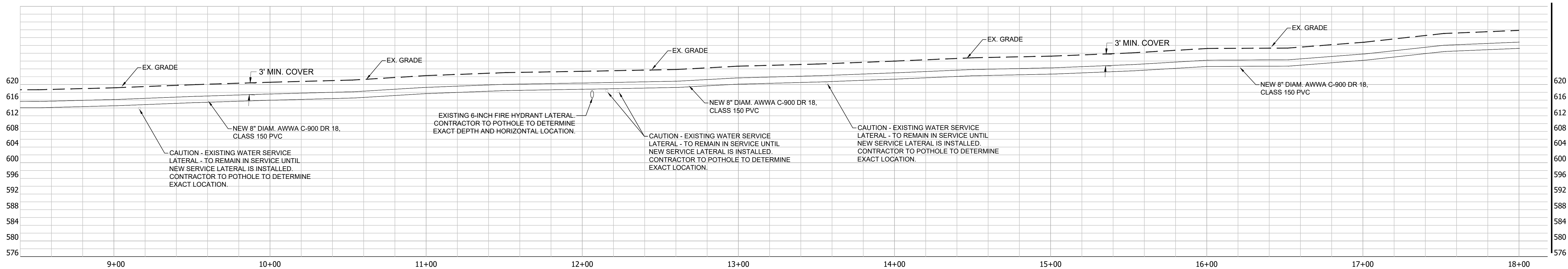
SCALE: 1" = 30'

SHEET 7 OF 10 SHEETS

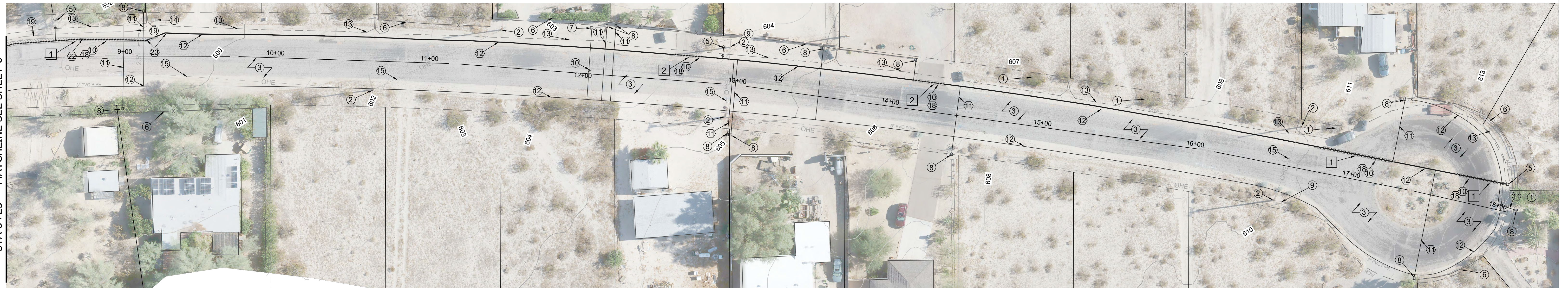
JOB NO. \_\_\_\_\_



STA 4+50 - MATCHLINE SEE SHEET 4



STA 8+25 - MATCHLINE SEE SHEET 6



HORIZONTAL SCALE: 1"=30'

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- 1 EXISTING TREE TO REMAIN.
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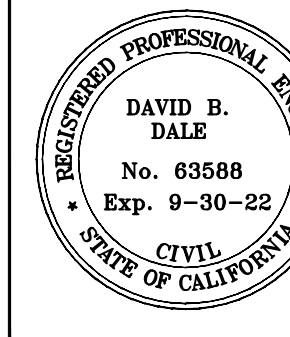
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DATE \_\_\_\_\_  
REG. EXP. \_\_\_\_\_



PREPARED UNDER THE DIRECT SUPERVISION OF:

DAVID B. DALE, PE  
63,588  
R.C.E. NO. \_\_\_\_\_  
DATE \_\_\_\_\_  
REG. EXP. 06/30/22

**PROJECT TITLE:**  
BORREGO WATER DISTRICT (CAPITAL IMPROVEMENTS PROJECTS)  
BENDING ELBOW, WEATHER VANE, ROCKING CHAIR DRIVE,  
WALKING H AND DOUBLE O WATER IMPROVEMENTS PROJECT

**SHEET CONTENT:**  
WATER IMPROVEMENT PLANS  
DOUBLE O - STATION 8+25 TO 18+00

SCALE: 1" = 30'

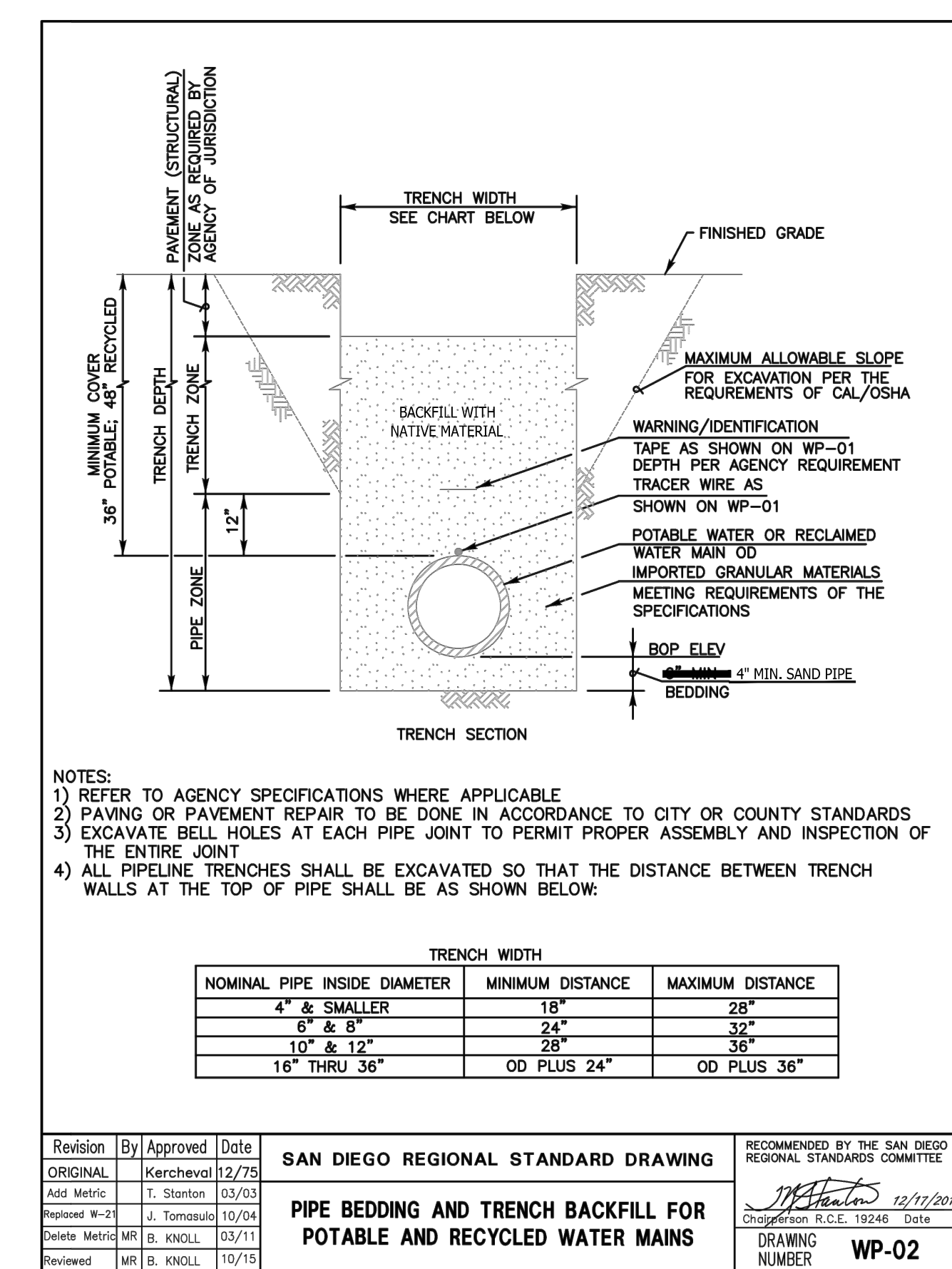
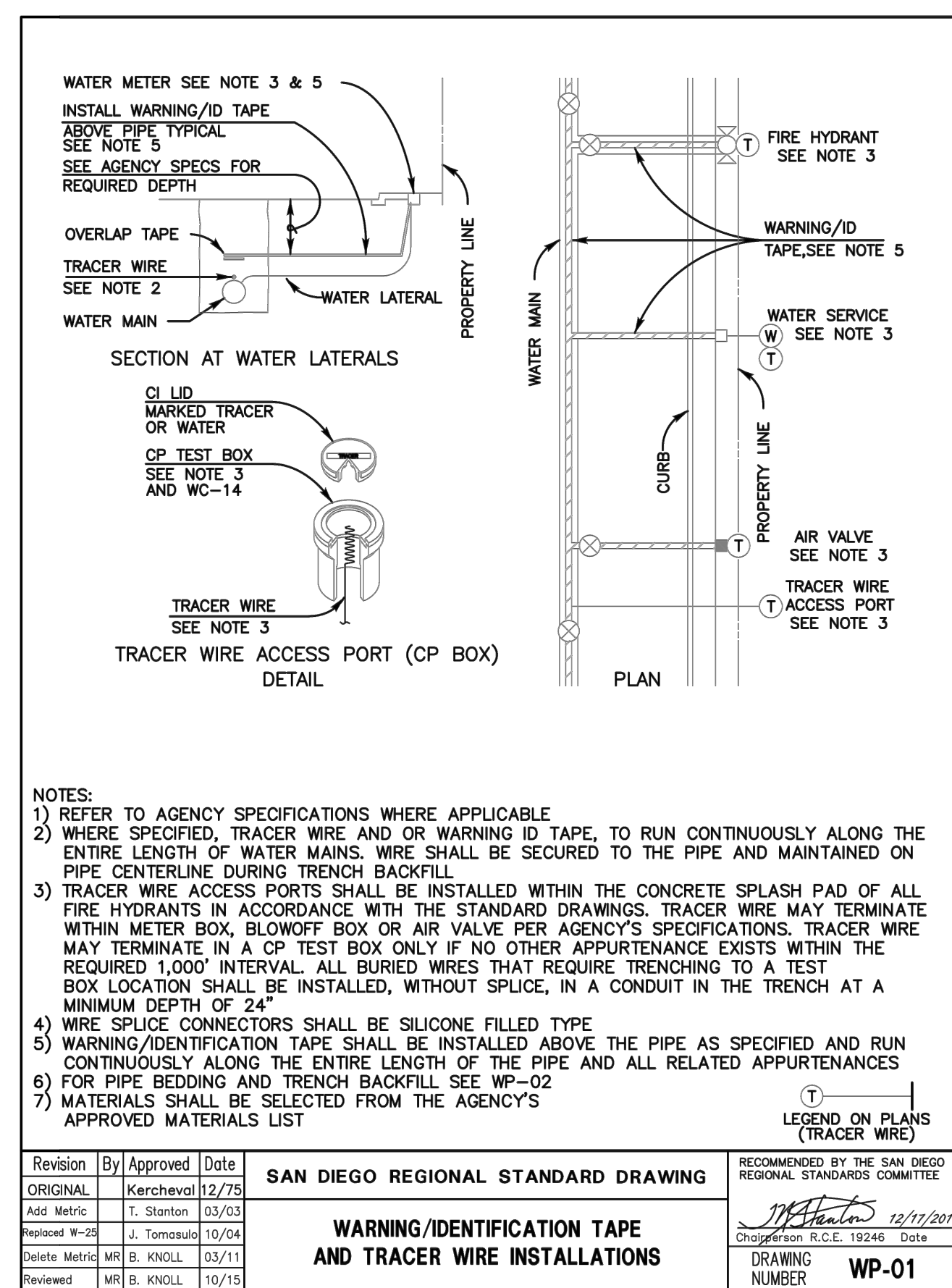
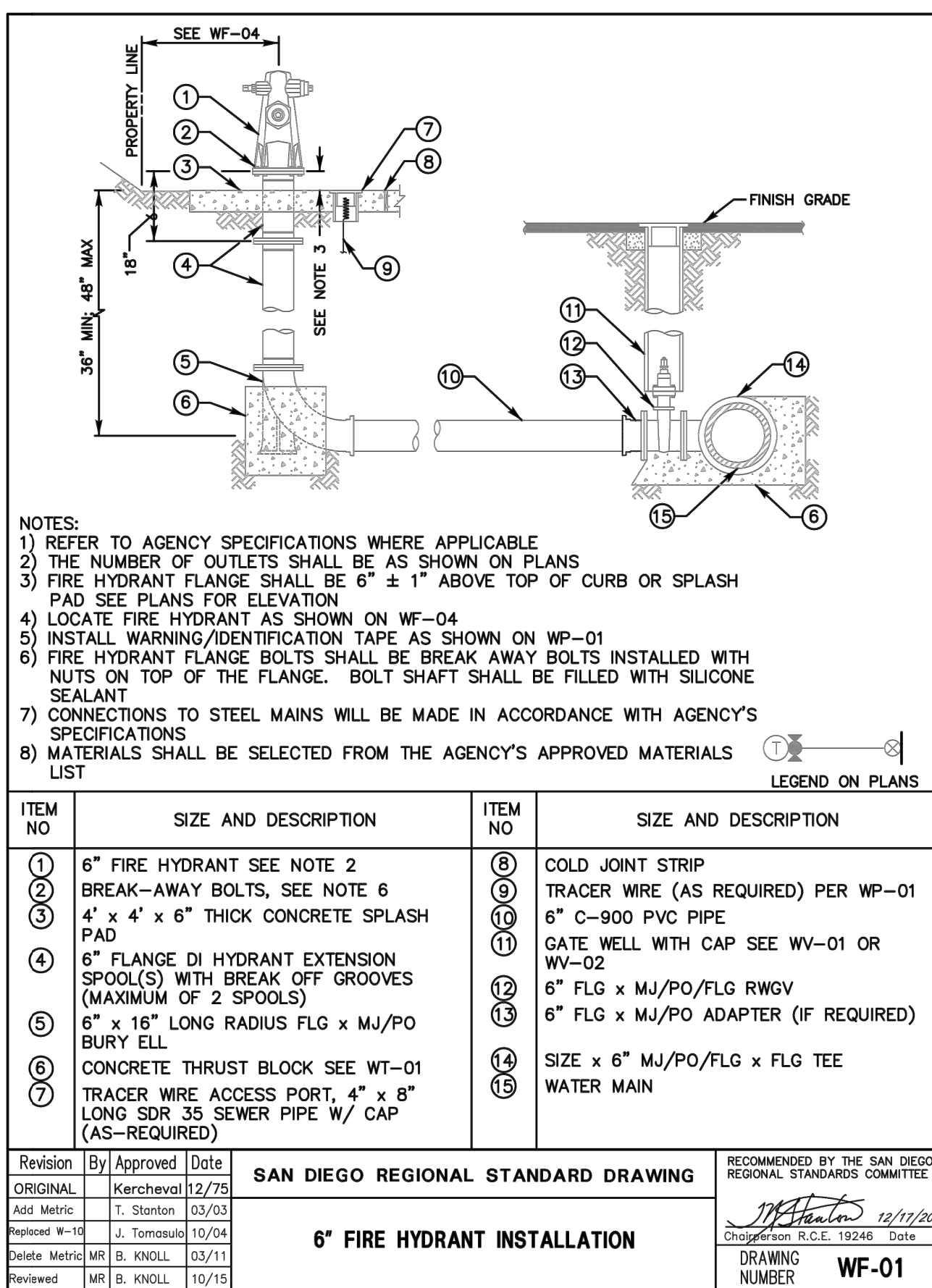
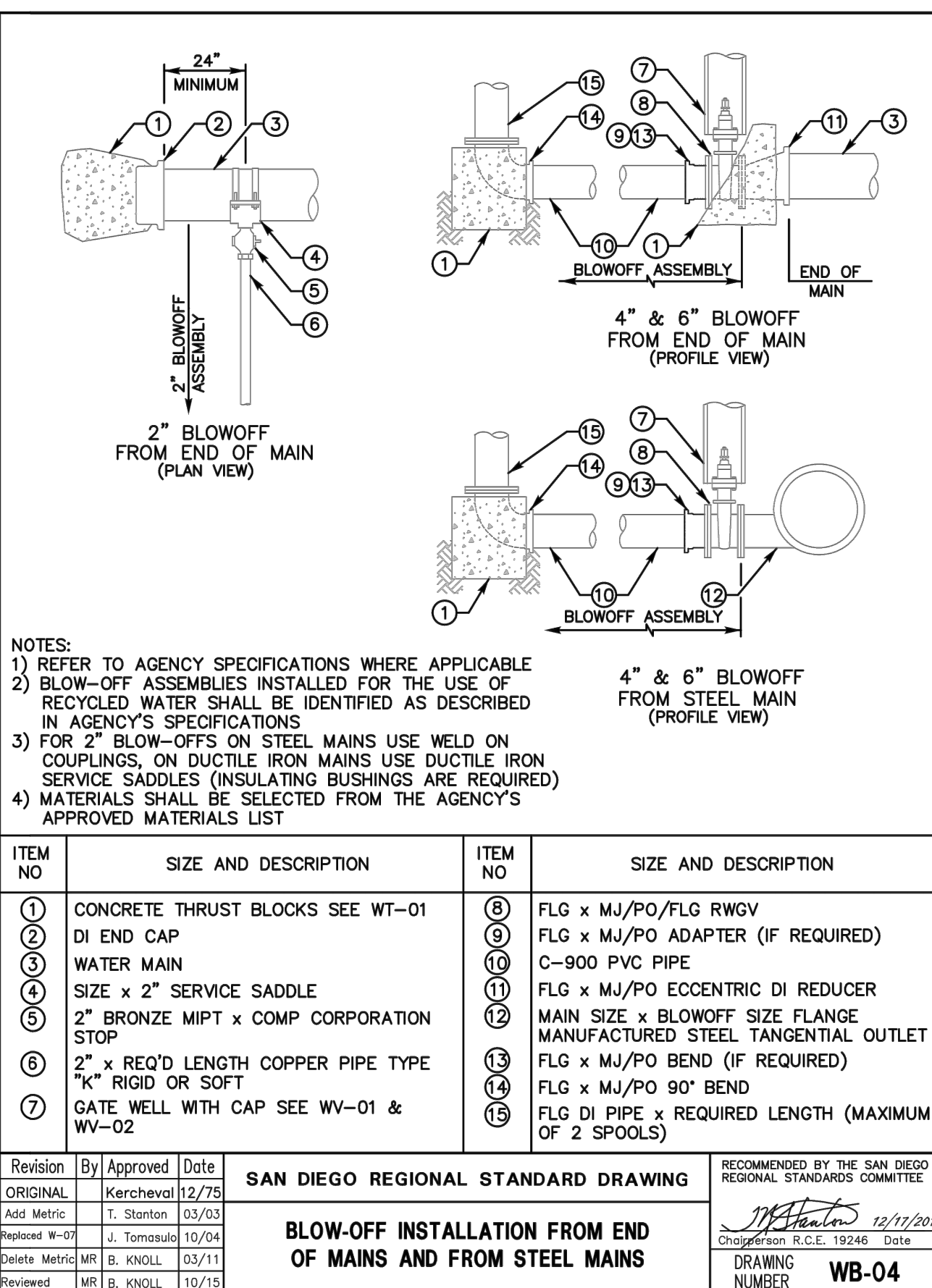
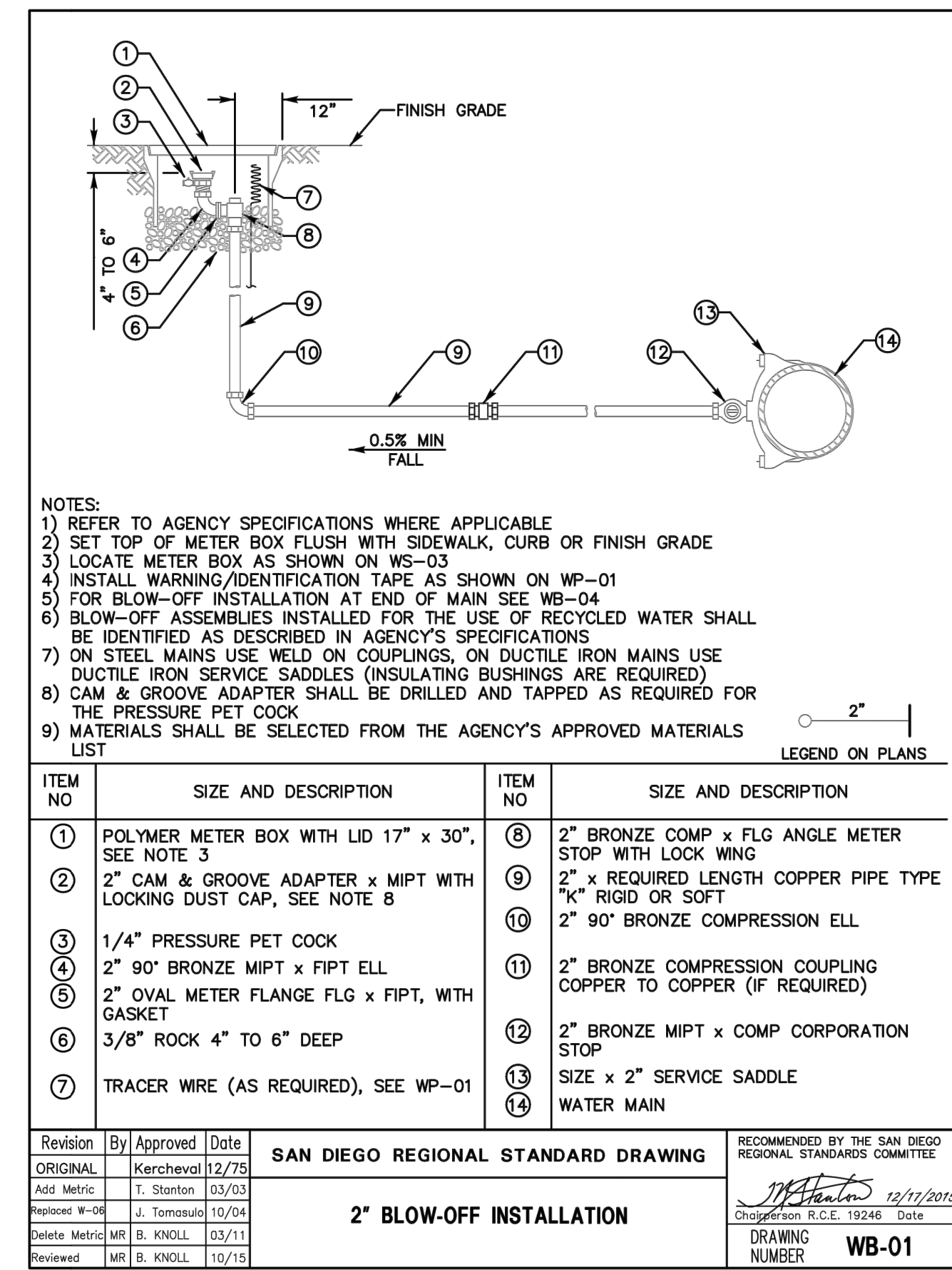
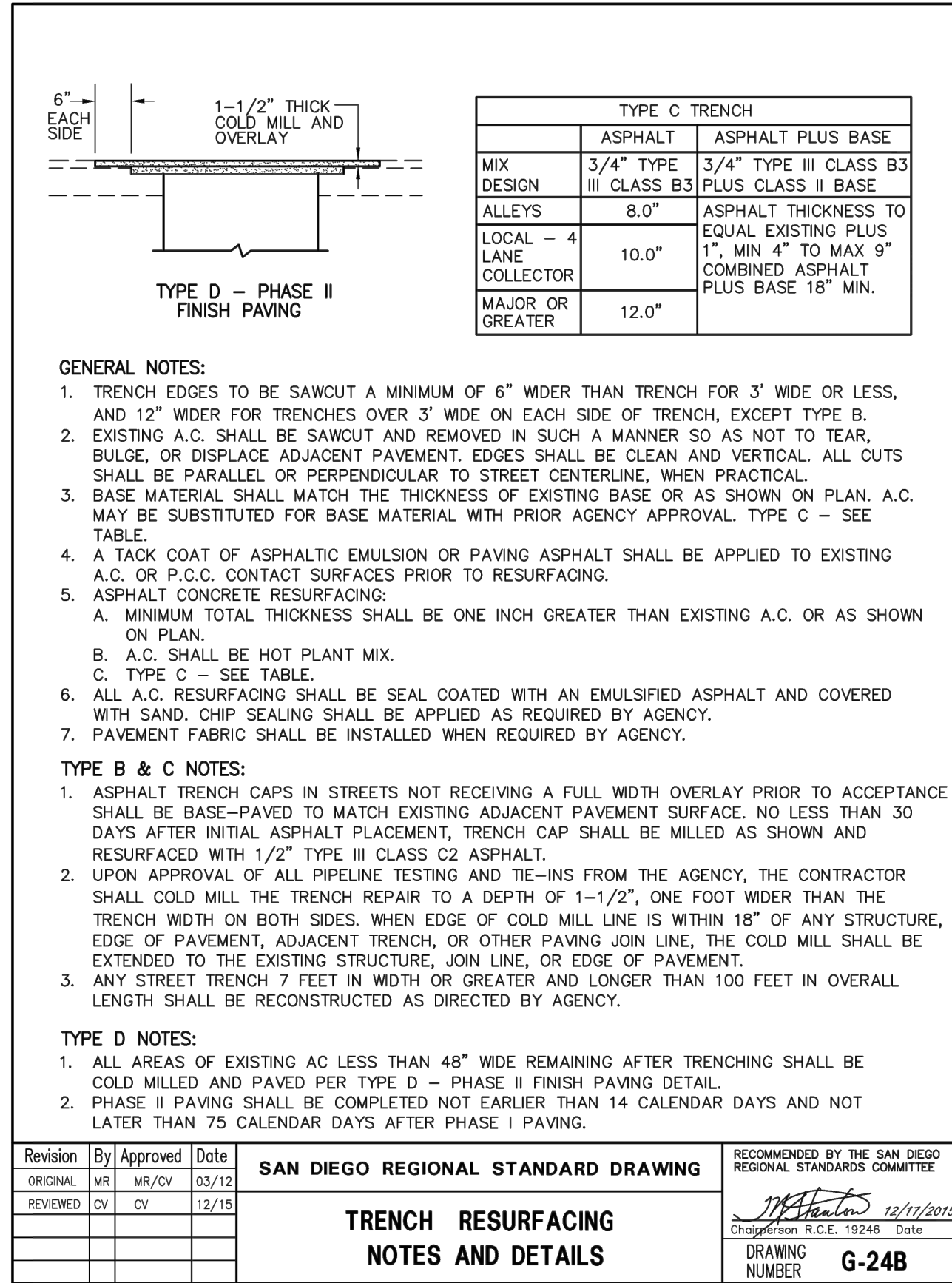
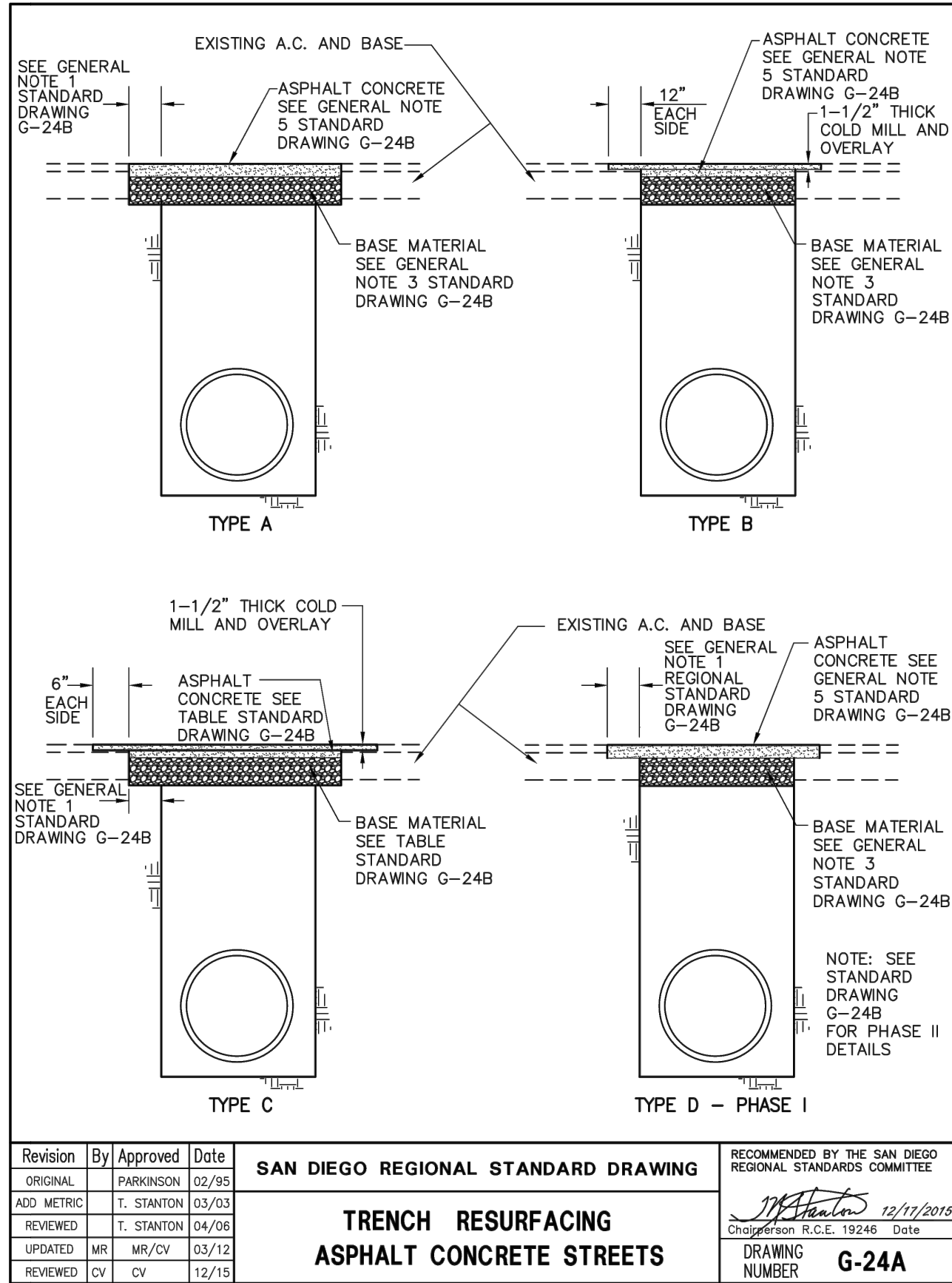
SHEET

8

OF 10 SHEET

JOB NO.





NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert  
Call: TOLL FREE  
811

TWO WORKING DAYS BEFORE YOU DIG.

NO.	REVISIONS:	APPROVED	DATE

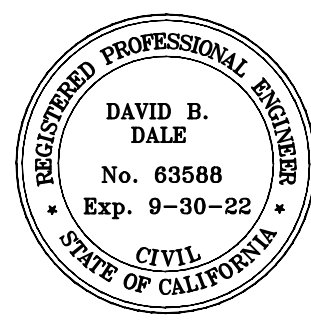
UNAUTHORIZED CHANGES & USES: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.

APPROVED FOR CONSTRUCTION BY:

DATE

R.C.E. NO.

REG. EXP.



PREPARED UNDER THE DIRECT SUPERVISION OF:

DAVID B. DALE, PE

69,121

R.C.E. NO.

06/30/20

REG. EXP.

PROJECT TITLE:  
BORREGO WATER DISTRICT (CAPITAL IMPROVEMENTS PROJECTS)  
BENDING ELBOW, WEATHER VANE AND ROCKING CHAIR DRIVE  
WATER IMPROVEMENTS PROJECT

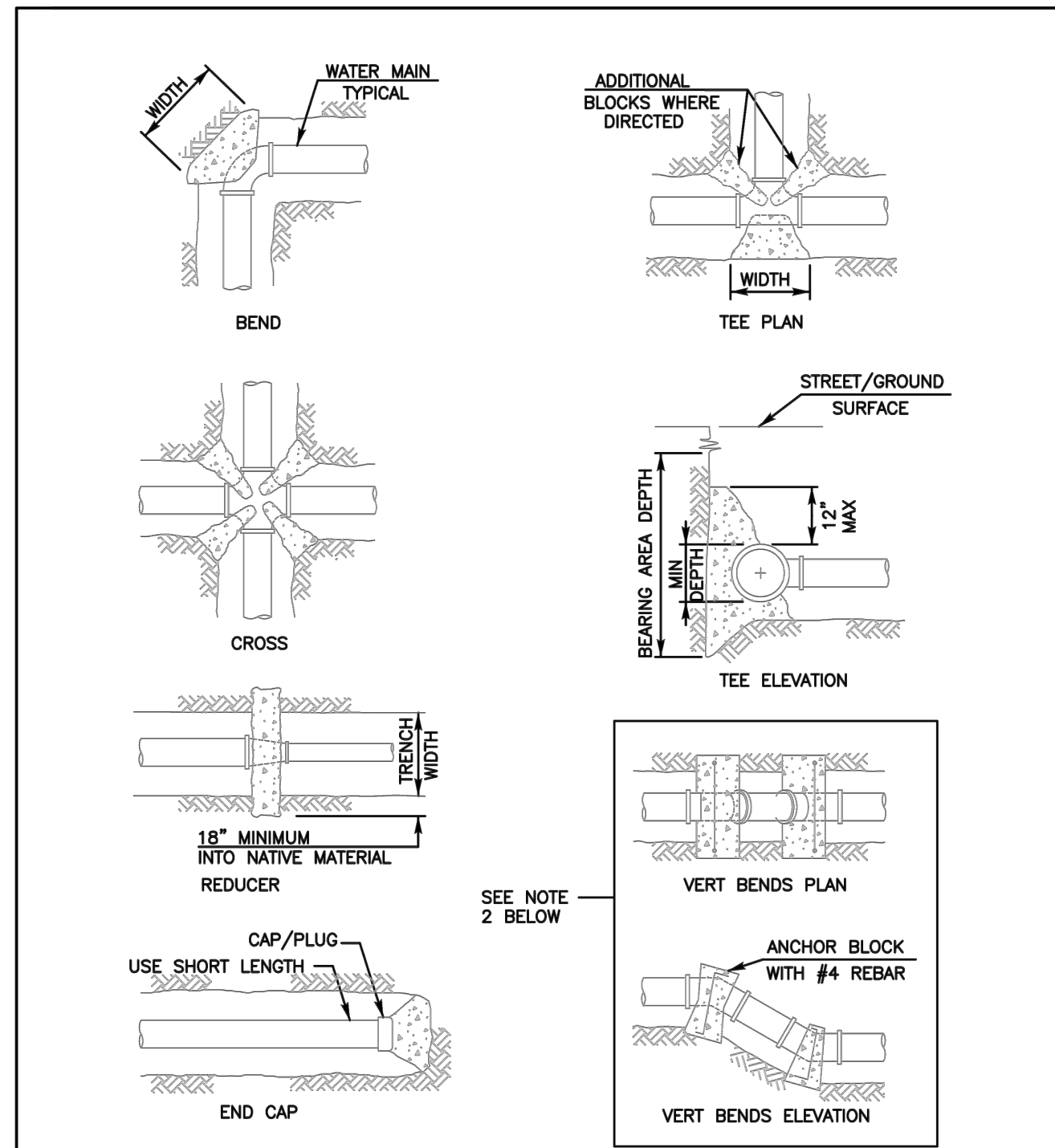
SHEET CONTENT:  
DETAILS

SCALE: NTS

SHEET  
9  
OF 10 SHEET

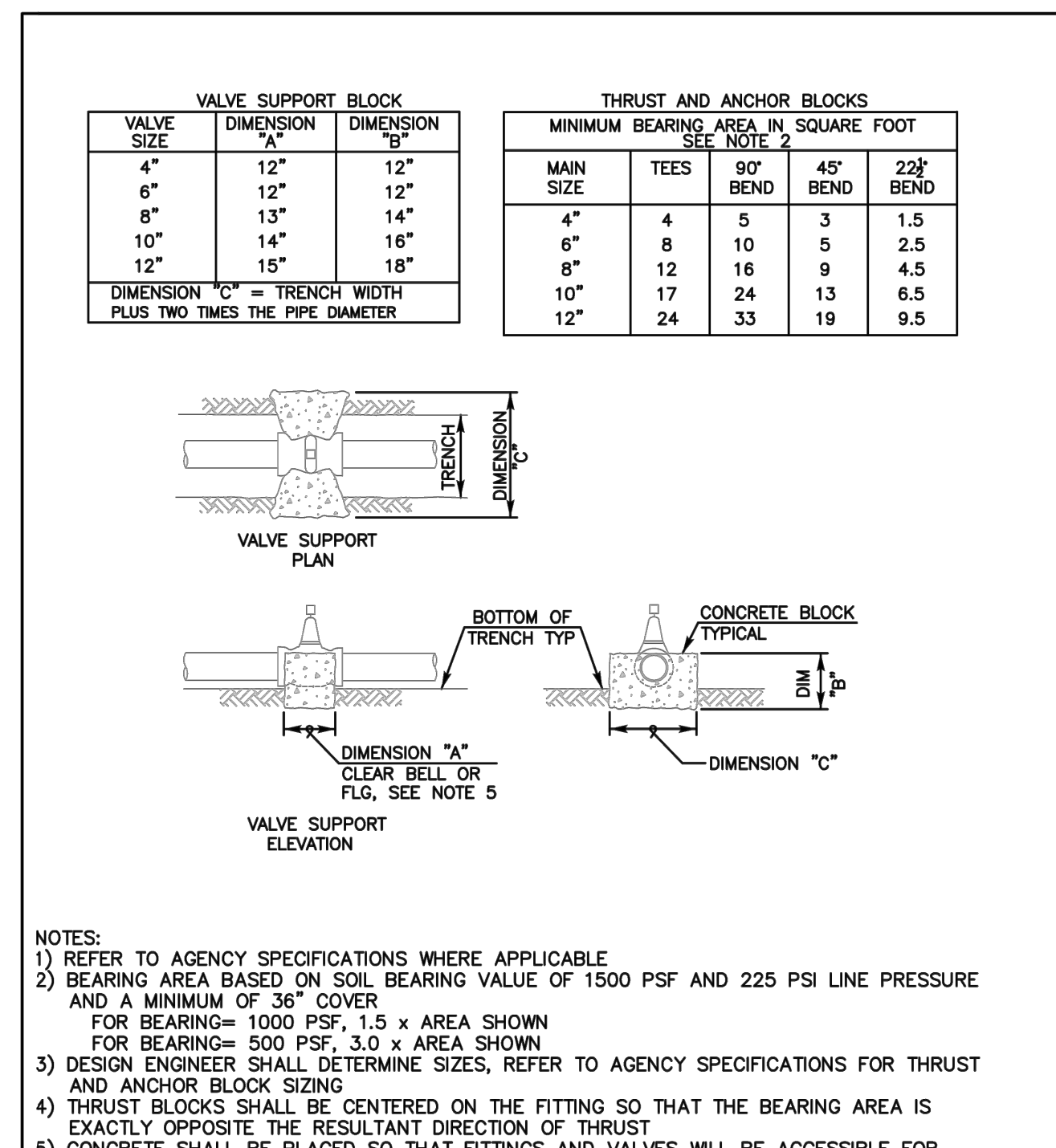
JOB NO.





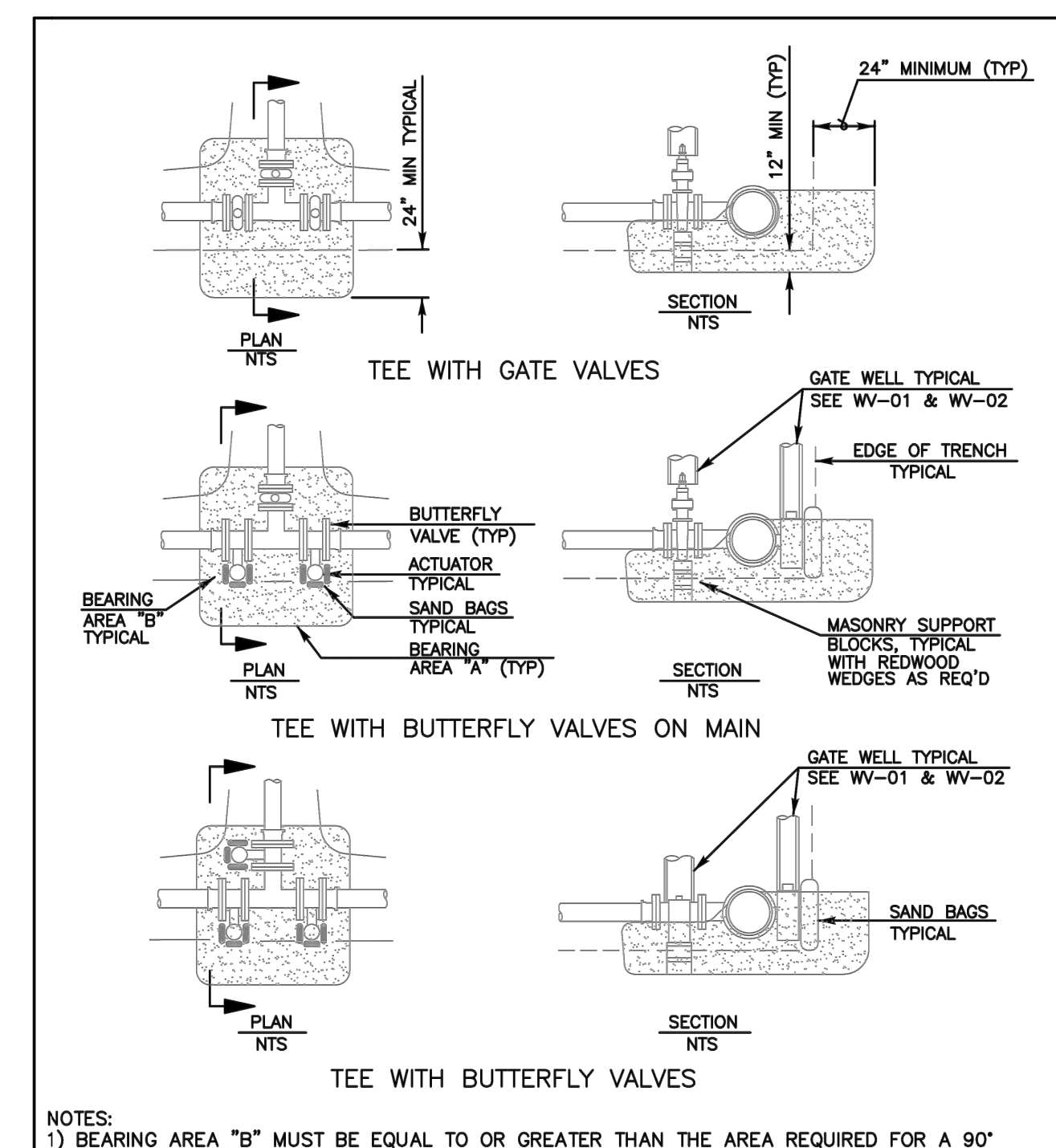
NOTES:  
 1) FOR ADDITIONAL THRUST BLOCKS, ANCHOR BLOCKS AND NOTES SEE WT-01 (2 OF 3) & (3 OF 3)  
 2) THE ANCHOR BLOCKS ON VERTICAL BENDS REQUIRE AGENCY APPROVAL

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kerchival	12/75		
Add Metric	T. Stanton		03/03	CONCRETE THRUST AND ANCHOR BLOCK INSTALLATIONS	DRAWING NUMBER WT-01 (1 OF 3)
Rep. W-1	J. Tomaszula		10/04		
Delete Metric	MR. B. KNOLL		03/11		
Reviewed	MR. B. KNOLL		10/15		



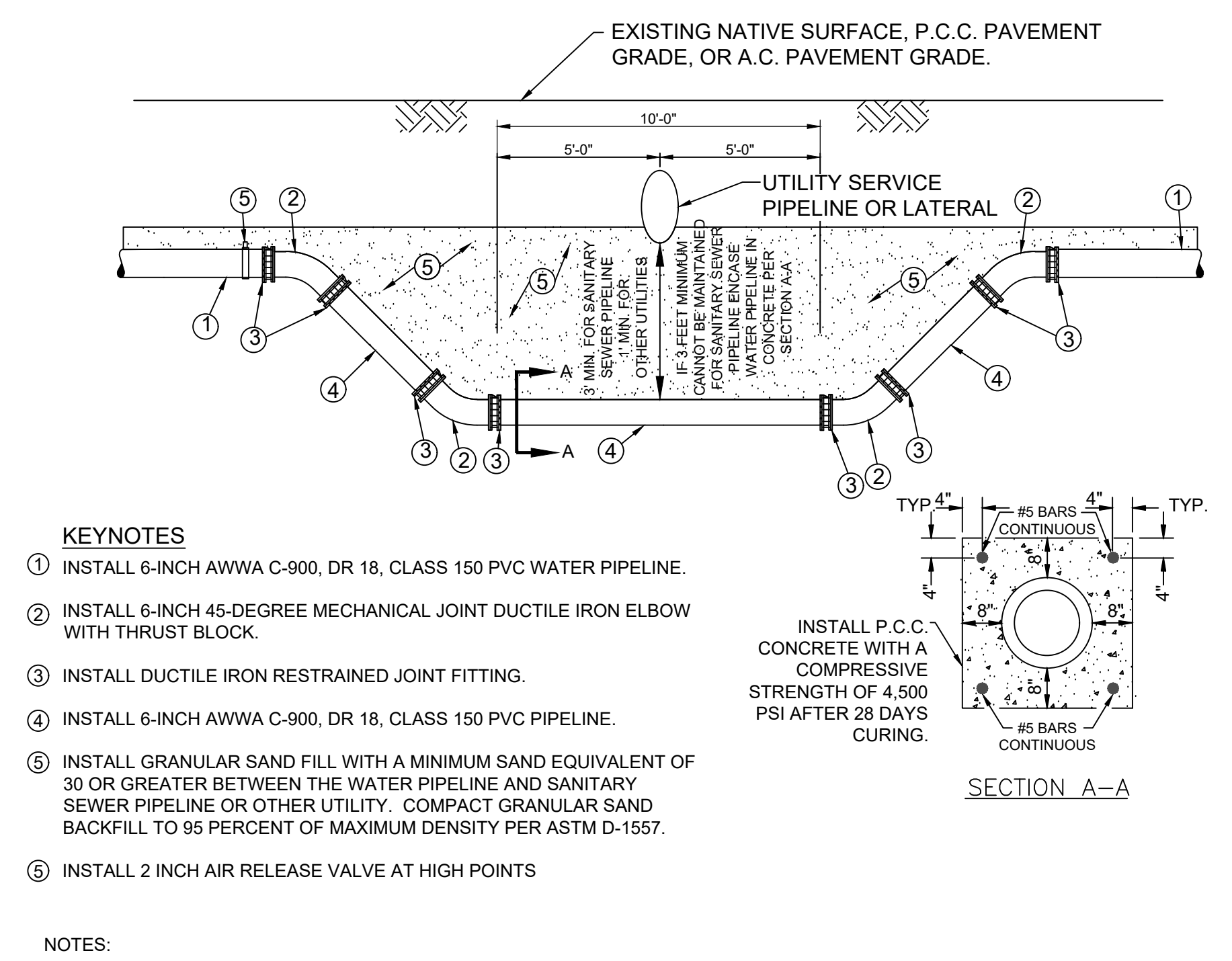
NOTES:  
 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE  
 2) BEARING AREA BASED ON SOIL BEARING VALUE OF 1500 PSF AND 225 PSI LINE PRESSURE AND A MINIMUM OF 36" COVER  
 3) DESIGN ENGINEER SHALL DETERMINE SIZES, REFER TO AGENCY SPECIFICATIONS FOR THRUST AND ANCHOR BLOCK SIZING  
 4) THRUST BLOCKS SHALL BE CENTERED ON THE FITTING SO THAT THE BEARING AREA IS EXACTLY OPPOSITE THE RESULTANT DIRECTION OF THRUST  
 5) CONCRETE SHALL BE PLACED SO THAT FITTINGS AND VALVES WILL BE ACCESSIBLE FOR REPAIR OR REPLACEMENT  
 6) ALL THRUST AND ANCHOR BLOCKS SHALL BE POURED AGAINST WETTED UNDISTURBED SOIL  
 7) FOR MINIMUM CONCRETE CURING TIME REFER TO AGENCY SPECIFICATIONS  
 8) FOR ADDITIONAL THRUST BLOCKS SEE WT-01 (1 OF 3) & (3 OF 3)

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kerchival	12/75		
Add Metric	T. Stanton		03/03	CONCRETE THRUST AND ANCHOR BLOCK INSTALLATIONS	DRAWING NUMBER WT-01 (2 OF 3)
Rep. W-1	J. Tomaszula		10/04		
Delete Metric	MR. B. KNOLL		03/11		
Reviewed	MR. B. KNOLL		10/15		



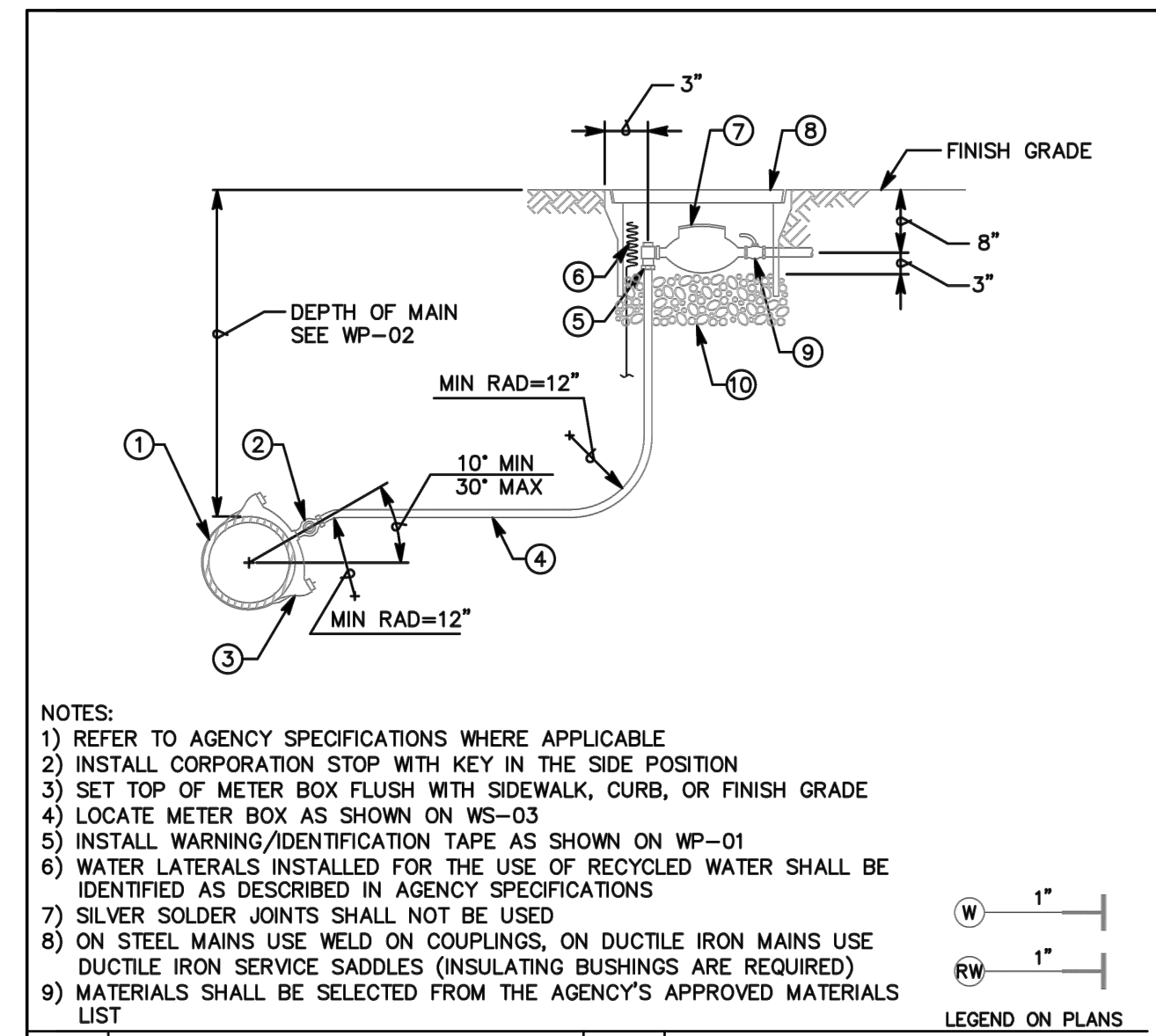
NOTES:  
 1) BEARING AREA "B" MUST BE EQUAL TO OR GREATER THAN THE AREA REQUIRED FOR A 90° ELBOW INSTALLATION  
 2) INSTALL SAND BAGS AROUND BUTTERFLY VALVE ACTUATOR TO ISOLATE IT FROM CONCRETE  
 3) BFV'S INSTALLED AT CROSSES OR TEES REQUIRE A FLANGED DUCTILE IRON SPOOL TO BE INSTALLED BETWEEN THE FITTING AND VALVE IN ACCORDANCE WITH THE AGENCY SPECIFICATIONS

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kerchival	12/75		
Add Metric	T. Stanton		03/03	CONCRETE THRUST AND ANCHOR BLOCK INSTALLATIONS	DRAWING NUMBER WT-01 (3 OF 3)
Rep. W-1	J. Tomaszula		10/04		
Delete Metric	MR. B. KNOLL		03/11		
Reviewed	MR. B. KNOLL		10/15		



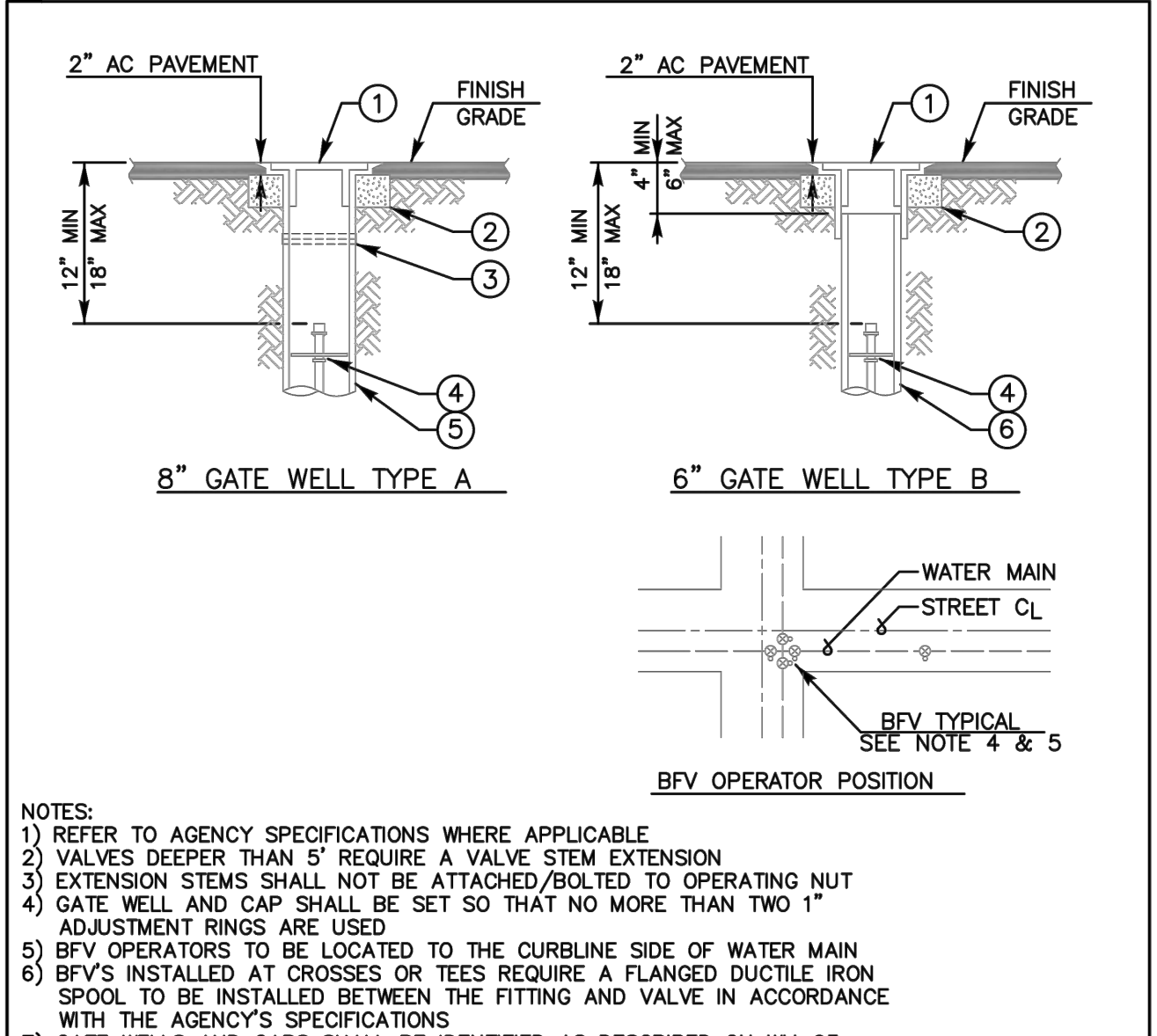
KEYNOTES  
 1) INSTALL 6-INCH AWWA C-900, DR 18, CLASS 150 PVC WATER PIPELINE.  
 2) INSTALL 6-INCH 45-DEGREE MECHANICAL JOINT DUCTILE IRON ELBOW WITH THRUST BLOCK.  
 3) INSTALL DUCTILE IRON RESTRAINED JOINT FITTING.  
 4) INSTALL 6-INCH AWWA C-900, DR 18, CLASS 150 PVC PIPELINE.  
 5) INSTALL GRANULAR SAND FILL WITH A MINIMUM SAND EQUIVALENT OF 30 OR GREATER BETWEEN THE WATER PIPELINE AND SANITARY SEWER PIPELINE OR OTHER UTILITY. COMPACT GRANULAR SAND BACKFILL TO 95 PERCENT OF MAXIMUM DENSITY PER ASTM D-1557.  
 6) INSTALL 2 INCH AIR RELEASE VALVE AT HIGH POINTS

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kerchival	12/75		
Add Metric	T. Stanton		03/03	UTILITY CROSSING DETAIL (UNDER)	DRAWING NUMBER WT-01 (3 OF 3)
Rep. W-1	J. Tomaszula		10/04		
Delete Metric	MR. B. KNOLL		03/11		
Reviewed	MR. B. KNOLL		10/15		



ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
1	WATER MAIN	7	WATER METER FURNISHED & INSTALLED BY THE WATER AGENCY OF JURISDICTION
2	1\"/>		

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kerchival	12/75		
Add Metric	T. Stanton		03/03	1\"/>	
Rep. W-1	J. Tomaszula		10/04		
Delete Metric	MR. B. KNOLL		03/11		
Reviewed	MR. B. KNOLL		10/15		



ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
1	GATE WELL WITH CAP SEE NOTE 7	4	VALVE STEM EXTENSION SEE NOTES 2 & 3
2	8\"/>		

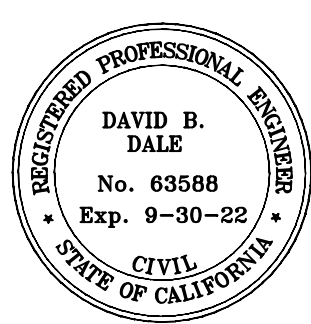
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kerchival	12/75		
Add Metric	T. Stanton		03/03	GATE WELL CAP & CAN INSTALLATION, FOR VALVES 4\"/>	
Rep. W-1	J. Tomaszula		10/04		
Delete Metric	MR. B. KNOLL		03/11		
Reviewed	MR. B. KNOLL		10/15		

NO.	REVISIONS:	APPROVED	DATE

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APPROVED FOR CONSTRUCTION BY:

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PREPARED UNDER THE DIRECT SUPERVISION OF:

DAVID B. DALE, PE

DATE

PROJECT TITLE:  
 BORREGO WATER DISTRICT (CAPITAL IMPROVEMENTS PROJECTS)  
 BENDING ELBOW, WEATHER VANE AND ROCKING CHAIR DRIVE  
 WATER IMPROVEMENTS PROJECT

SHEET CONTENT:  
 DETAILS

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	10
	OF 10 SHEET
	JOB NO.