

# STANDARD DRAWINGS



CITY of CLOVIS

## 2020

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CITY OF CLOVIS ENGINEERING DIVISION

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<https://www.cityofclovis.com>

# STANDARD DRAWINGS

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PULL BOXES TO BE AT DISTANCES NO GREATER THAN 500' APART. BOXES PREFERRED TO BE AT STREET CORNERS.

HDPE ITS CONDUITS TO BE INSTALLED PER PLANS OR AS DIRECTED BY THE ENGINEER.

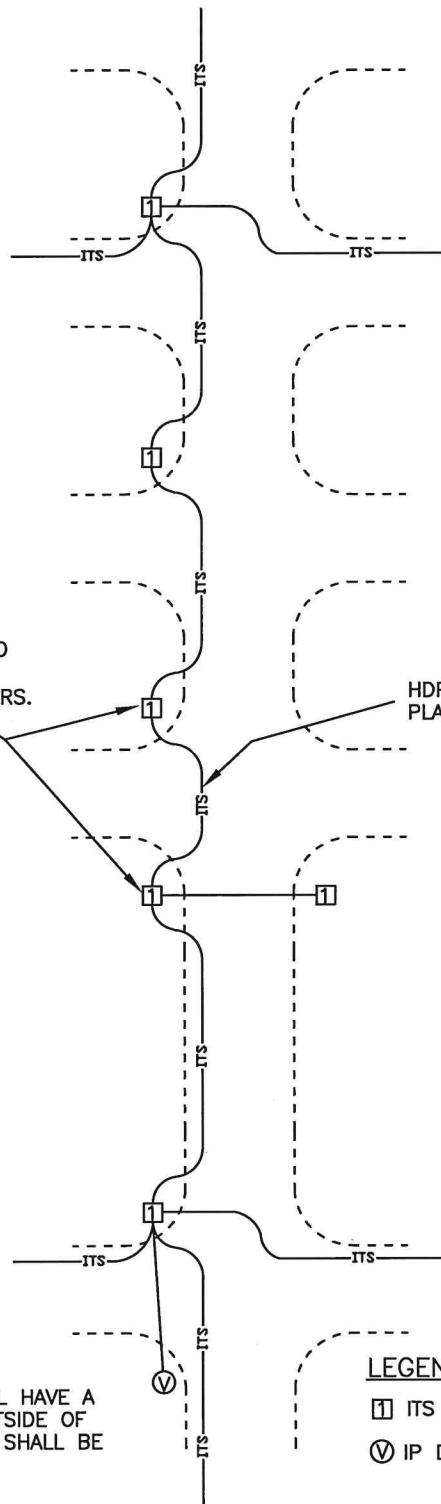
**NOTE:**

ALL UNDERGROUND CONDUIT SHALL HAVE A TRACER WIRE AFFIXED TO THE OUTSIDE OF THE CONDUIT. THE TRACER WIRE SHALL BE NO. 10 STRANDED COPPER, WHITE INSULATION.

**LEGEND**

☐ ITS VAULT TO BE N48T OR PER PLANS.

Ⓢ IP DEVICE PER CURRENT CITY OF CLOVIS STANDARD.



# CITY OF CLOVIS

## TYPICAL ITS CORRIDOR LAYOUT

DWG NO.

**ITS-1**

REF. STD. SPECIFICATIONS:  
SECTION 82 & 86

APPROVED BY:

*[Signature]*

CITY ENGINEER

DATE: 1/6/2020

NO.

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08-03-11

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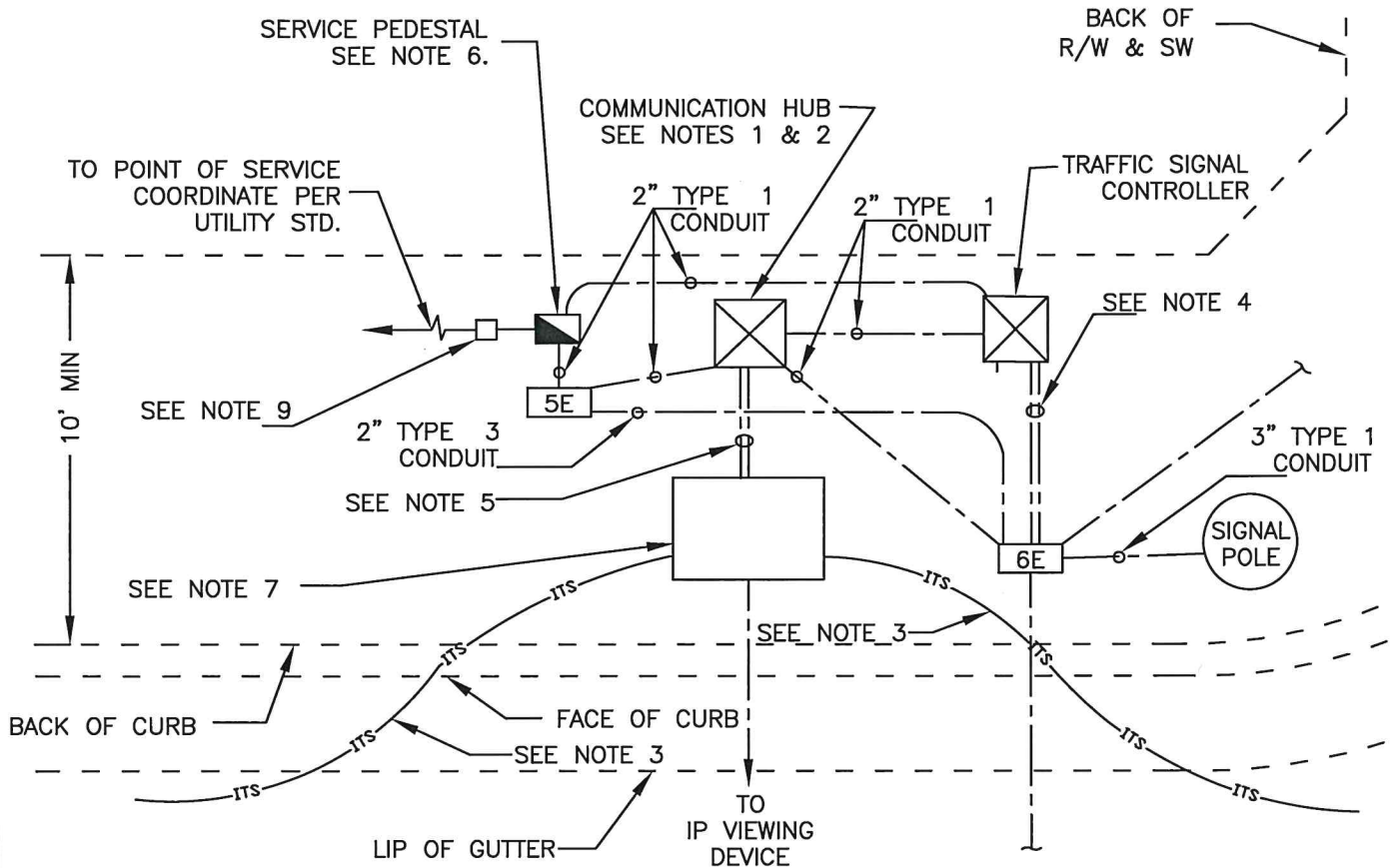
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#### NOTES:

1. ITS COMMUNICATION HUB SHALL BE INSTALLED IN A LOCATION APPROVED BY CITY ENGINEER. COMMUNICATION HUB CABINET SHOULD BE AS NEAR TO N48T ITS VAULT AS POSSIBLE.
2. ITS INTERSECTION COMMUNICATIONS CABINET PER CURRENT CITY OF CLOVIS STANDARDS.
3. ITS CONDUITS TO BE INSTALLED PER PLANS AND AS DIRECTED BY THE ENGINEER.
4. TWO 4" DIAMETER TYPE 1 CONDUIT.
5. TWO 3" ITS HDPE CONDUITS INSTALLED PER STD. DWG. ITS-4, TYP.
6. INSTALL SERVICE PEDESTAL (TESCO 26-100 OR APPROVED EQUAL) AT LOCATIONS REQUIRING A HUB CABINET. SEE STD. DWG TS-5.
7. N48T ITS VAULT, SEE STD. DWG. ITS-4.
8. FOR TRAFFIC SIGNAL EQUIPMENT LAYOUT, SEE TRAFFIC SIGNAL (TS) STD. DRAWINGS.
9. CALTRANS #3 1/2E PULLBOX (OR AS SHOWN ON PLANS).



## CITY OF CLOVIS

### TYPICAL ITS INTERSECTION LAYOUT WITH HUB

DWG NO.

ITS-2

REF. STD. SPECIFICATIONS:  
SECTION 82 & 86

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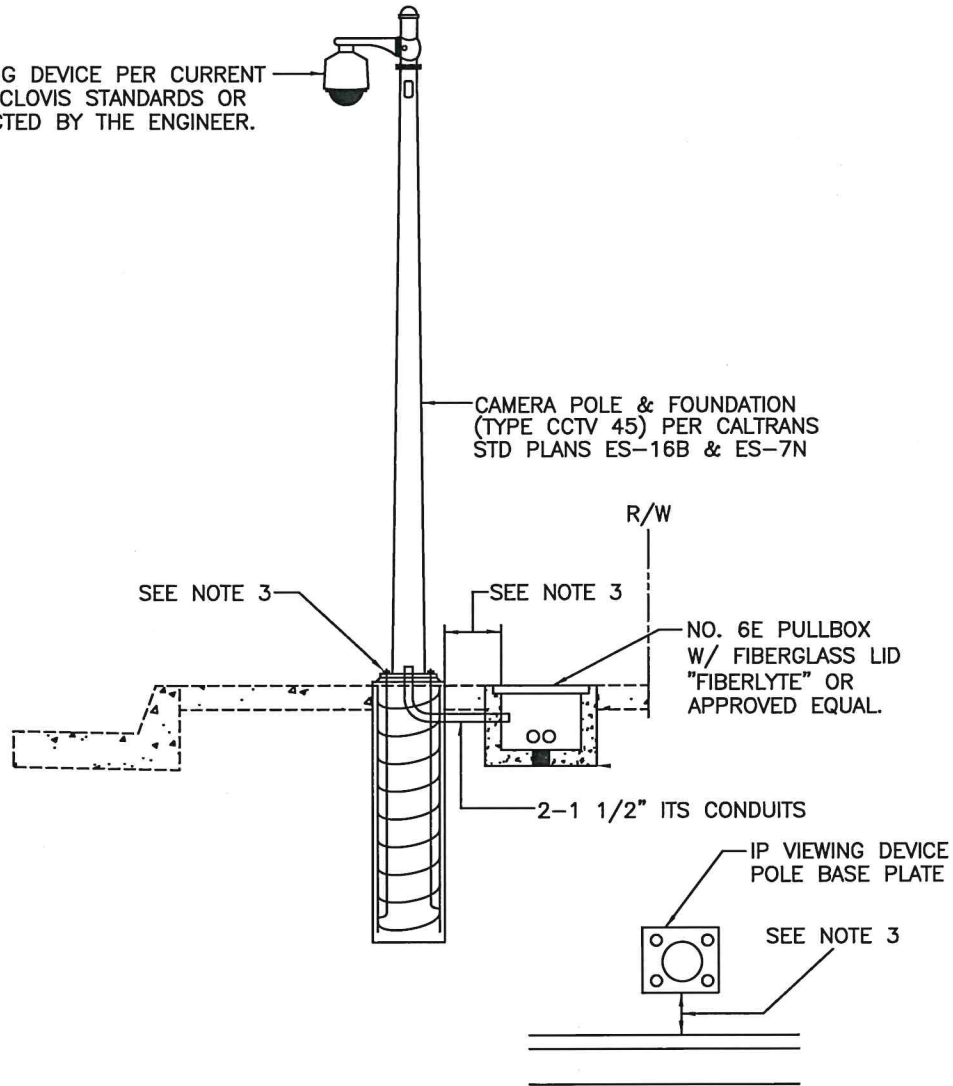
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IP VIEWING DEVICE PER CURRENT  
CITY OF CLOVIS STANDARDS OR  
AS DIRECTED BY THE ENGINEER.



#### NOTES:

1. THE CONTRACTOR SHALL VERIFY EXISTING UTILITY LOCATIONS, IDENTIFYING POTENTIAL CONFLICTS BEFORE ORDERING OR FABRICATING ANY MATERIAL.
2. DURING POLE ERECTION, THE POST SHALL BE RAKED AS NECESSARY WITH THE USE OF LEVELING NUTS TO PROVIDE A PLUMB POLE AXIS.
3. ALIGN SIDE OF POLE BASE PLATE PARALLEL WITH CURB FACE. LOCATE POLE AS DIRECTED BY CITY ENGINEER. IF CURB & GUTTER DOESN'T EXIST, ALIGN BASE PLATE PER CITY ENGINEER. MAINTAIN MINIMUM ADA CLEARANCES AROUND POLE.



# CITY OF CLOVIS

DWG NO.

## ITS-3

### IP VIEWING DEVICE

REF. STD. SPECIFICATIONS:  
SECTION 82 & 86

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CITY ENGINEER

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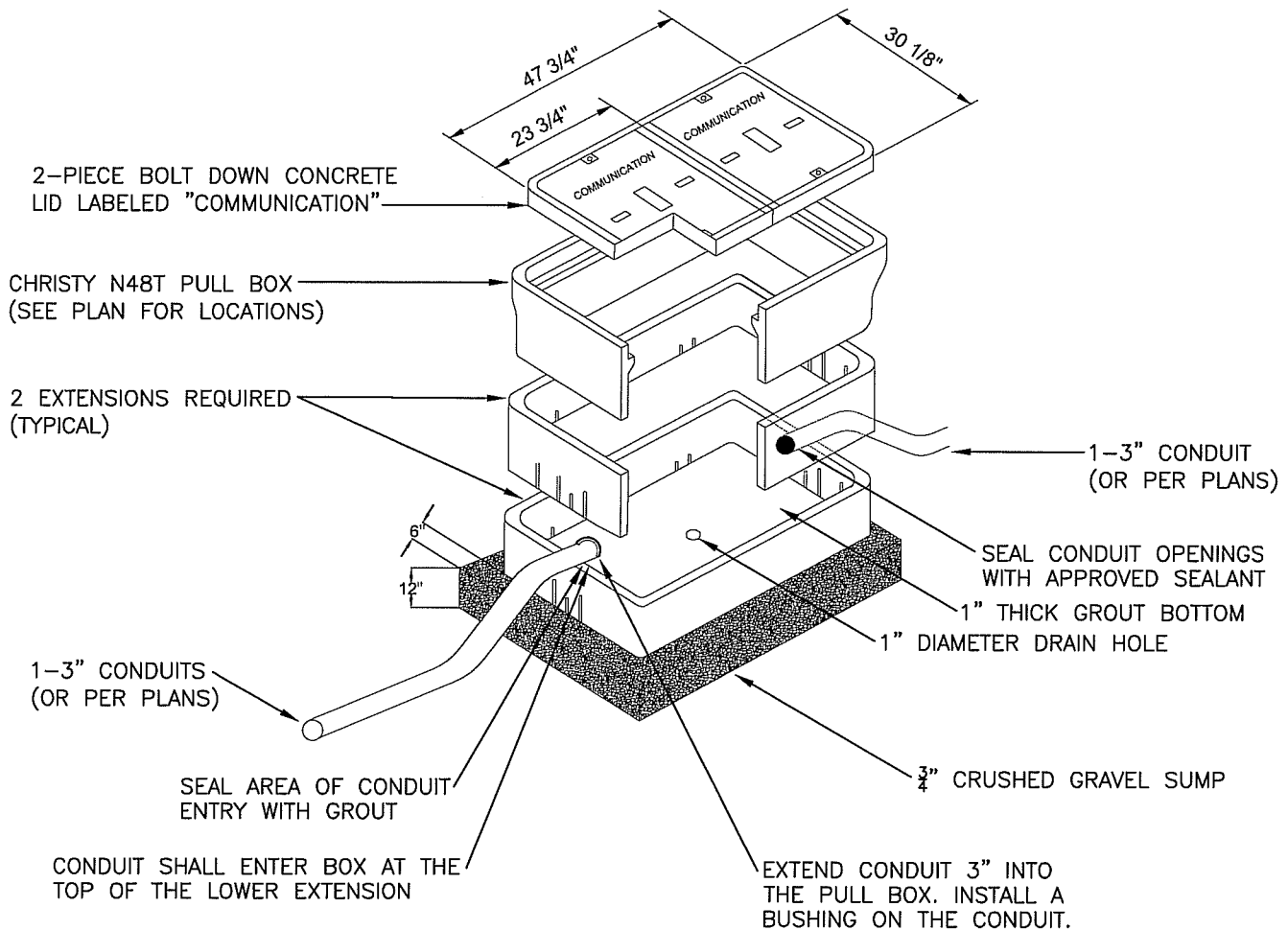
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NOTE: A LAYER OF ROOFING PAPER SHALL BE WRAPPED AROUND THE PULL BOX AND EXTENSIONS PRIOR TO BACKFILLING DIRT.

PLACE A 1' WIDE 6" THICK CONCRETE COLLAR AROUND PULL BOX.

**NOTE:**

THIS PULL BOX SHALL BE USED FOR ALL FIBER OPTIC CABLES RUN IN CONJUNCTION WITH FIBER OPTIC COMMUNICATIONS SYSTEMS. REFERENCE IS MADE TO STANDARD SPECIFICATIONS SECTION 82, "FIBER OPTIC FACILITIES" FOR INSTALLATION REQUIREMENTS.



# CITY OF CLOVIS

## N48T FIBER PULL BOX

DWG NO.

**ITS-4**

REF. STD. SPECIFICATIONS:  
SECTION 82 & 86

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CITY ENGINEER

DATE:

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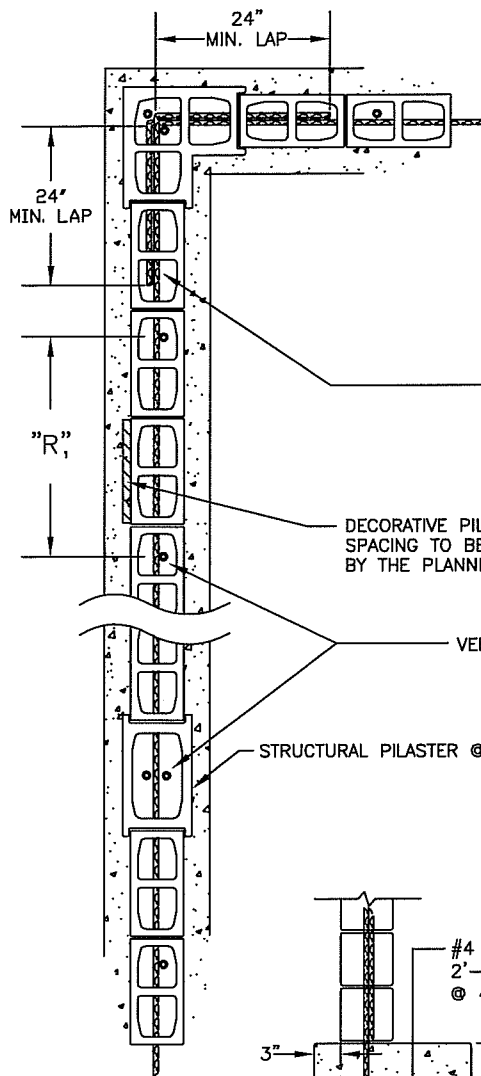
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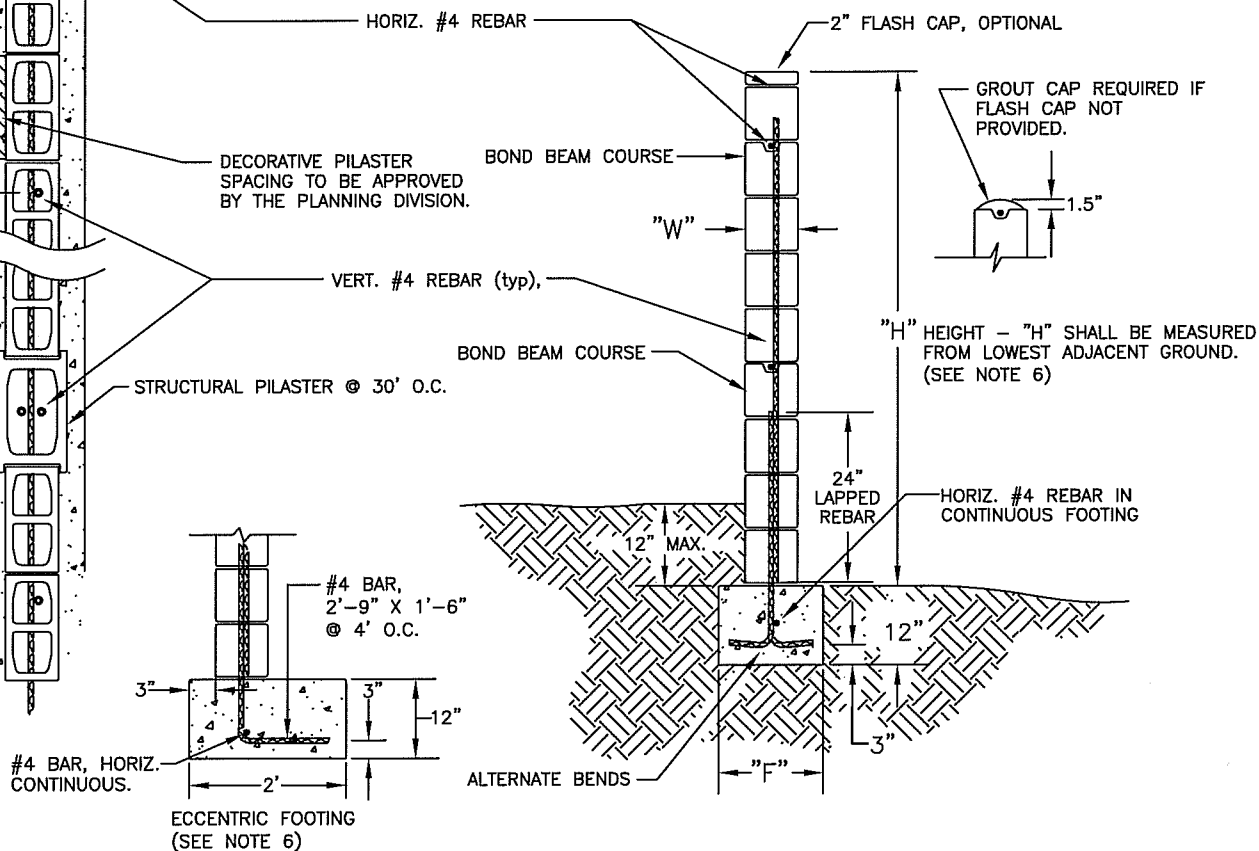
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SHEET 1 OF 1



DIMENSION TABLE			
"H"	"W"	"F"	"R <sub>1</sub> "
2'	6" MIN.	12"	NONE
2' to 3'	6" MIN.	12"	56" O.C.
3' to 4'	6" MIN.	12"	48" O.C.
4' to 5'	6" MIN.	14"	40" O.C.
5' to 6'	6" MIN.	16"	32" O.C.
OVER 6' SEE NOTE 6.			



#### NOTES:

1. ALL BLOCK WALLS (FENCES) REQUIRE A CITY OF CLOVIS BUILDING PERMIT.
2. SOIL UNDER FOOTING TO BE COMPACTED TO 90% RELATIVE COMPACTION. PROVIDE COMPACTION REPORT TO BUILDING DIVISION.
3. FOOTING SHALL BE 2500 PSI @ 28 DAYS CONCRETE. FOOTINGS SHALL NOT ENCROACH ONTO ADJACENT PROPERTY. ECCENTRIC FOOTINGS (L-TYPE) MAY BE USED TO OFFSET WALL AT P/L.
4. CONCRETE BLOCK SHALL BE 2000 PSI WITH TYPE AND COLOR APPROVED BY THE PLANNING DIVISION.
5. ALL WALLS TO BE PLUMB WITH ALL BLOCK COURSES LAID LEVEL. ALL CELLS TO BE FILLED WITH 2000 PSI @ 28 DAYS GROUT.
6. THE ECCENTRIC FOOTING SHOWN HAS "NO LESS THAN" DIMENSIONS AND SIZES. ACTUAL ECCENTRIC FOOTINGS, ALL WALLS OVER 6' HIGH, AND ALL ALTERNATIVE WALLS TENTATIVELY APPROVED BY THE CITY SHALL BE DESIGNED BY A REGISTERED CIVIL ENGINEER AND SHALL BE FINALLY APPROVED BY THE CITY ENGINEER.



# CITY OF CLOVIS

## CONCRETE MASONRY FENCE

DWG NO.

M-1

REF. STD. SPECIFICATIONS  
SECTION 81

APPROVED BY:

NO.

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SCALE: NTS

CITY ENGINEER

DATE:

1/29/11

03-16-09

01-18-11

02-15-11

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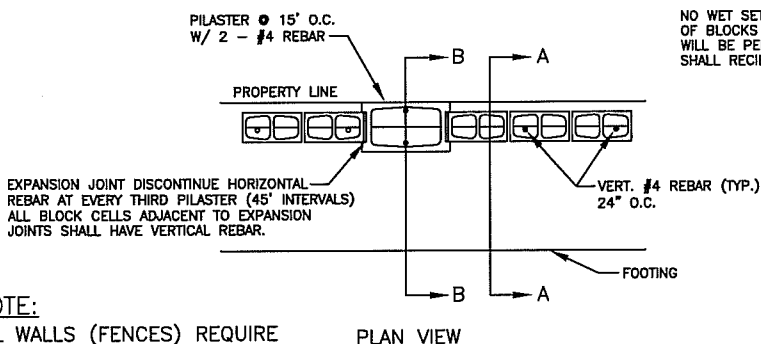
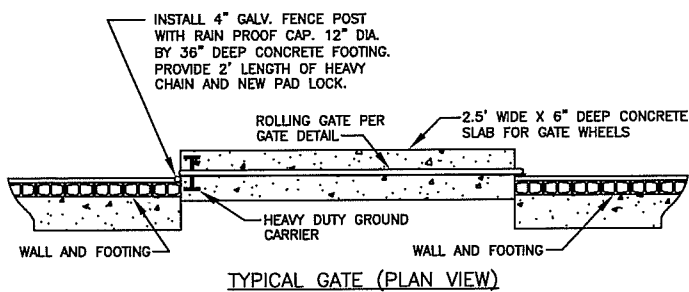
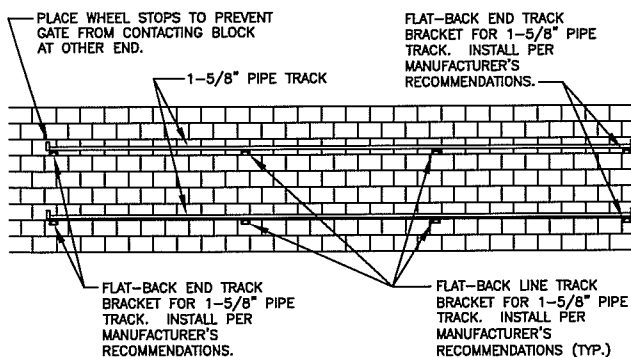
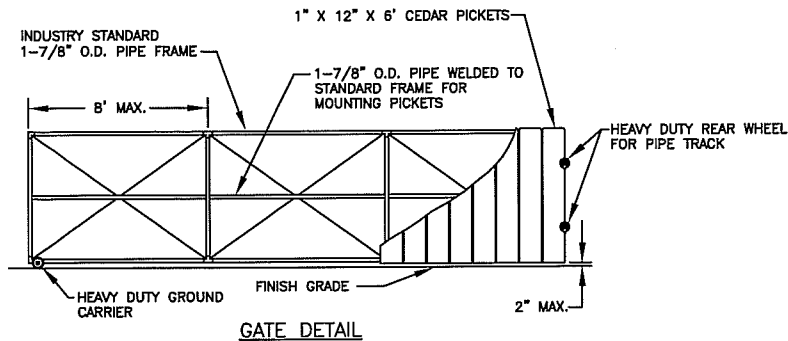
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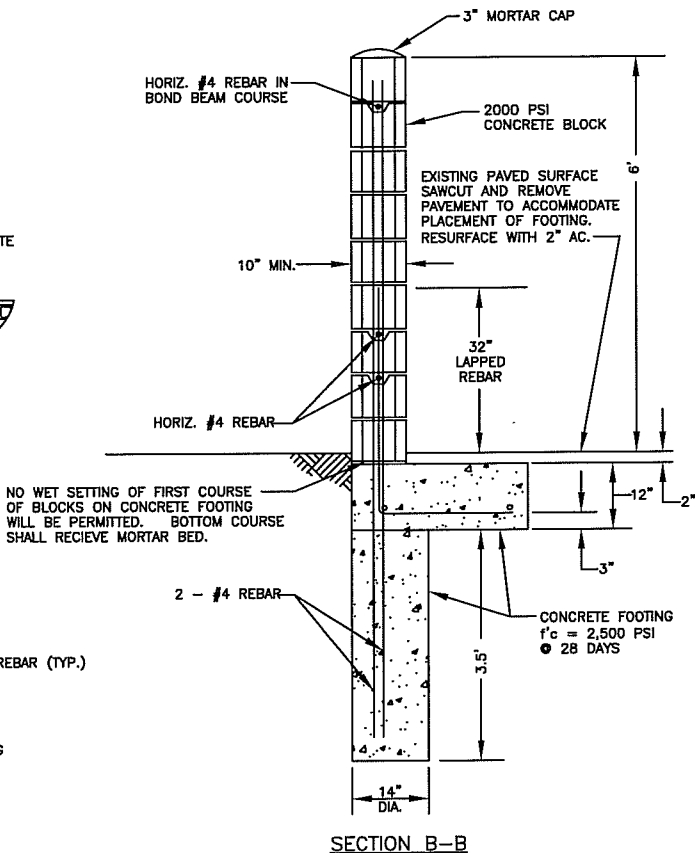
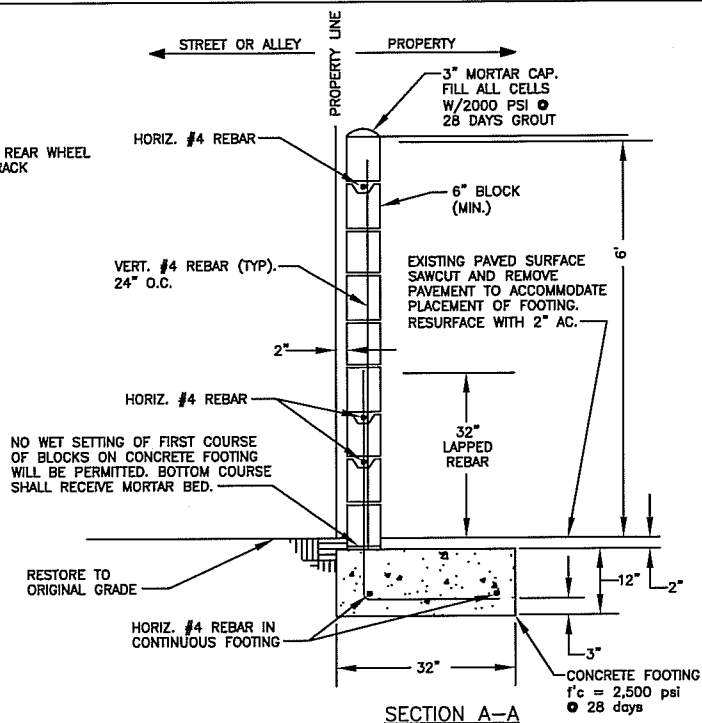
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SHEET 1 OF 1



**NOTE:**  
ALL WALLS (FENCES) REQUIRE  
CITY BUILDING PERMIT.



# CITY OF CLOVIS

## BLOCK FENCE W/ ROLLING GATE

DWG NO.  
**M-1A**

REF. STD. SPECIFICATIONS  
SECTION 81 & STD.  
DRAWING M-1

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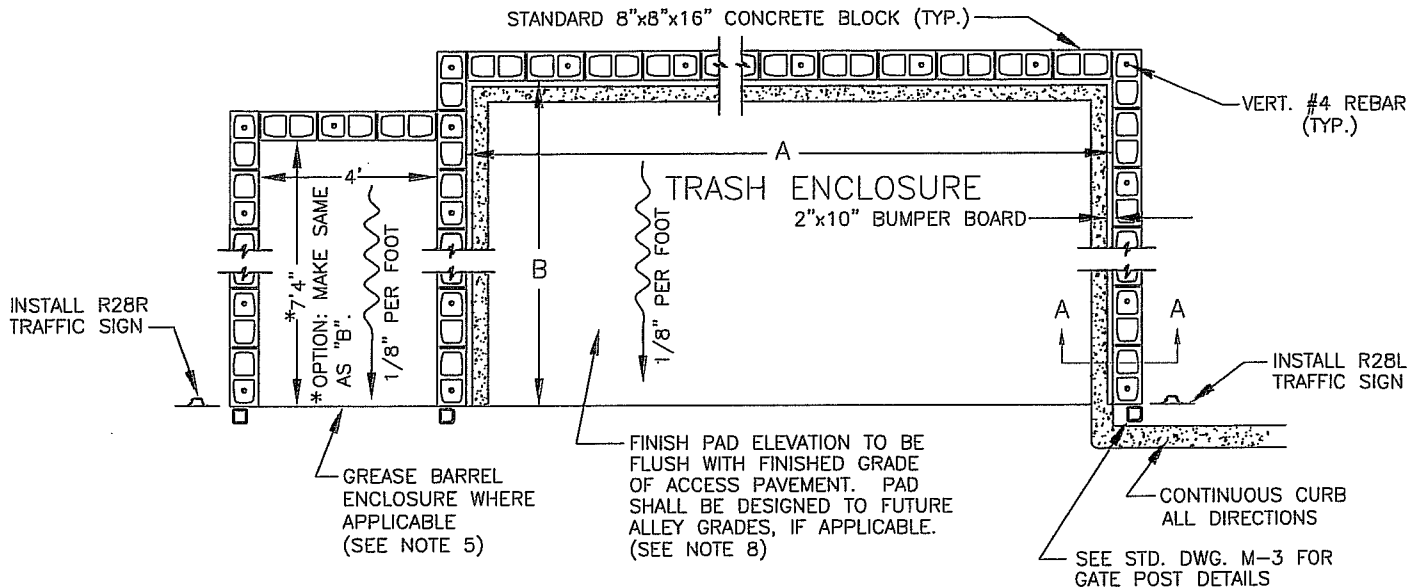
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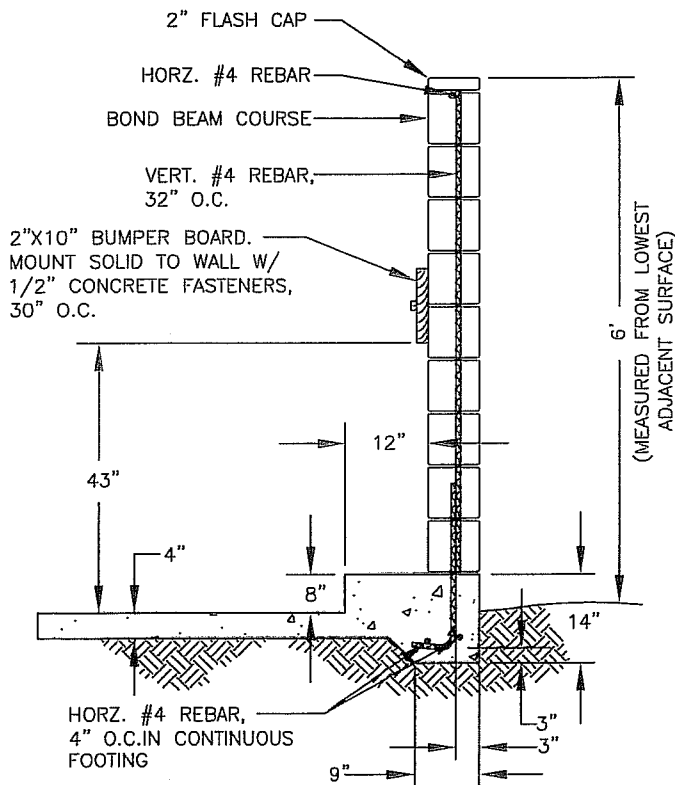


INSIDE-WALL ENCLOSURE DIMENSIONS

	A	B
TYPE I	10'8"	10'4"
TYPE II	14'8"	10'4"
TYPE III	18'8"	10'4"
TYPE IV	14'8"	15'4"
TYPE V	18'8"	15'4"

NOTES:

1. ALL ENCLOSURES TO BE CONSTRUCTED USING 8"x8"x16" 2000 PSI CONCRETE BLOCK TO MATCH BUILDING FEATURES. CITY BUILDING PERMIT REQUIRED FOR ENCLOSURE.
2. ALL CELLS SHALL BE GROUTED SOLID W/ 2000 PSI @ 28 DAYS GROUT.
3. CONCRETE PAD FORMS SHALL BE INSPECTED BY THE CITY BUILDING DIVISION PRIOR TO POUR.
4. CONCRETE PAD SHALL BE CONSTRUCTED ON MIN. 6" OF UNDISTURBED SOIL, SAND BEDDING OR 90% C.N.S.
5. GREASE BARREL ENCLOSURES ARE REQUIRED FOR ALL RESTAURANTS AND FOOD SERVICE ESTABLISHMENTS.
6. SEE STD. DWG. M-3B FOR GATE DETAILS.
7. ACCESS TO ENCLOSURE SHALL BE PAVED AND CLEAR OF SPEED BUMPS OR OTHER OBSTRUCTIONS.
8. FOOTINGS AND FLOOR SHALL BE CONCRETE, 2500 PSI @ 28 DAYS, INCLUDING GATE POST FOOTINGS.



SECTION A-A



CITY OF CLOVIS

TRASH BIN ENCLOSURE

DWG NO.

M-2

REF. STD. SPECIFICATIONS

APPROVED BY:

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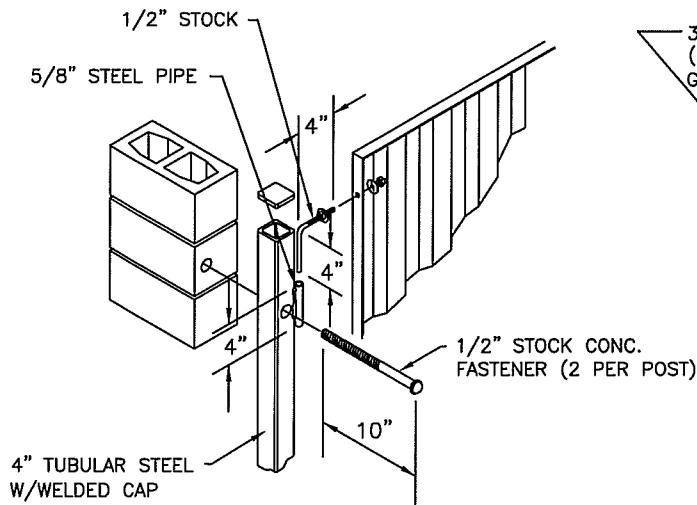
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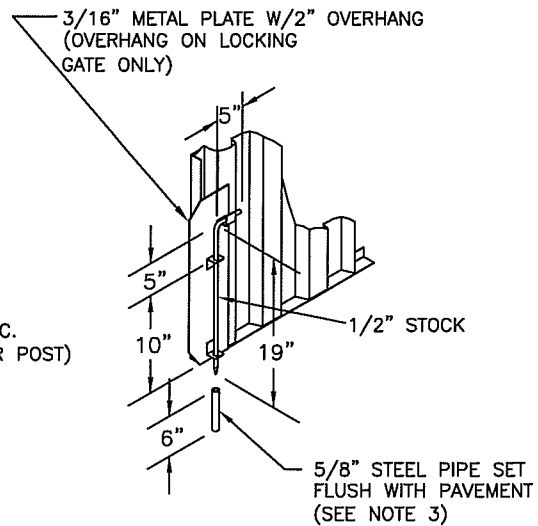
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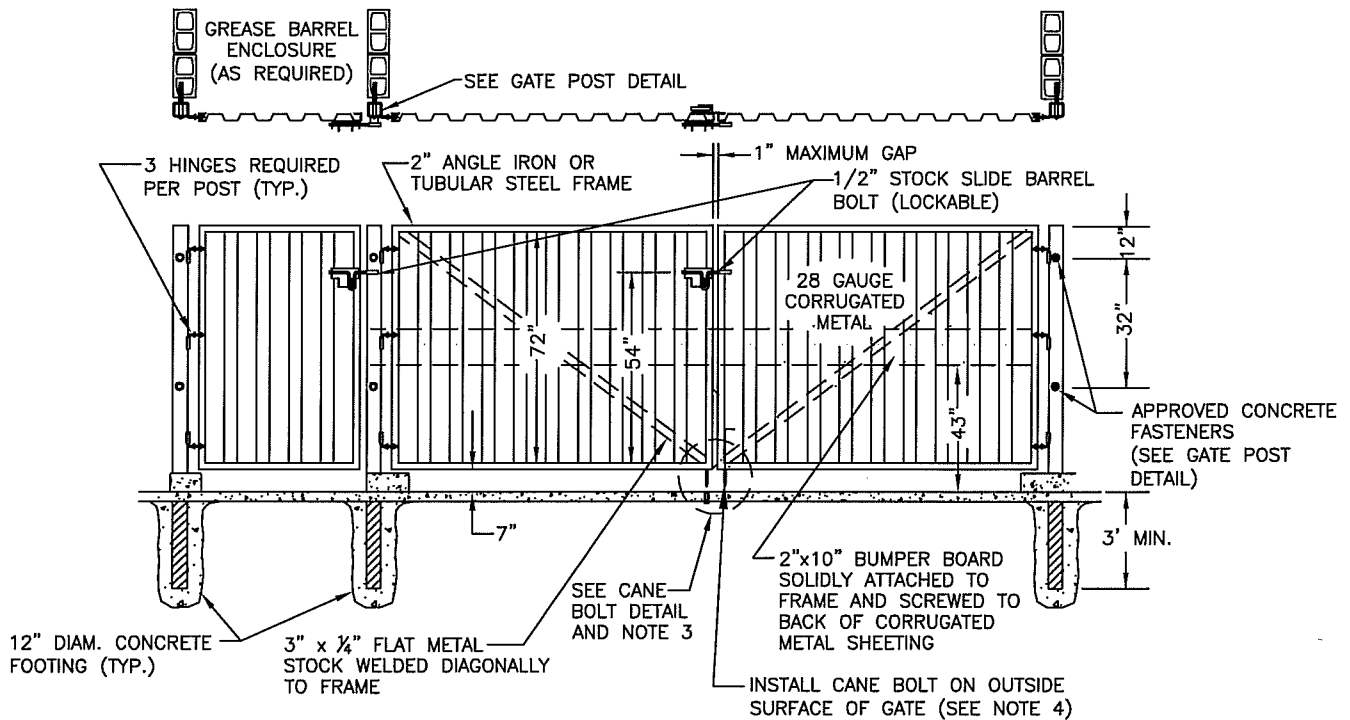


GATE POST DETAIL



CANE BOLT DETAIL

SEE NOTE 4 FOR LOCATIONS OF CANE BOLTS. (INSIDE OR OUTSIDE SURFACES OF GATES)



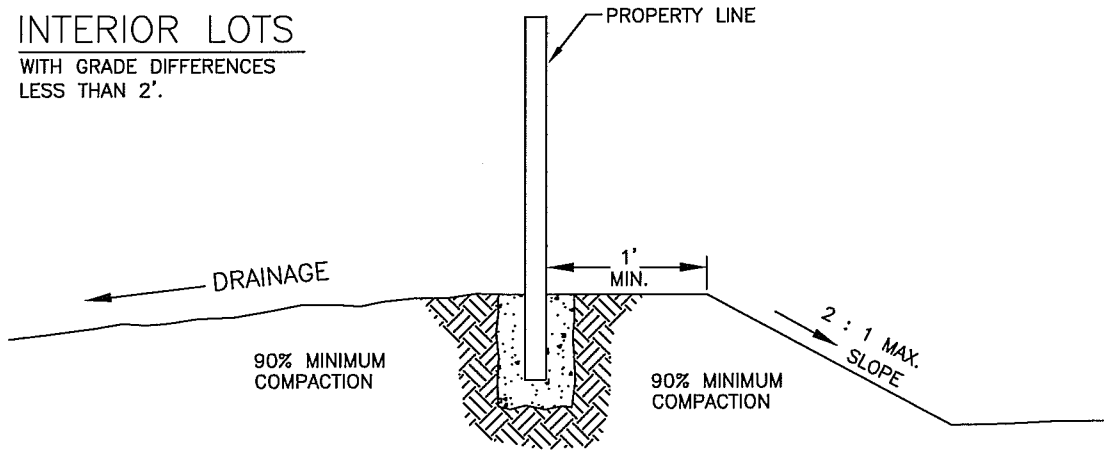
### NOTES:

1. GATES TO BE PAINTED TO MATCH BUILDING ACCENT FEATURES.
2. DESIGN, ENGINEERING AND CONSTRUCTION NOT SPECIFICALLY NOTED SHALL BE IN ACCORDANCE WITH ACCEPTED INDUSTRY STANDARDS AND OF FIRST QUALITY.
3. SECONDARY CANE BOLT RETAINER TO BE PLACED FOR EACH GATE SUCH THAT GATE IS HELD IN A POSITION 90 DEGREES TO THE CLOSED POSITION.
4. INSTALL CANE BOLT ON OUTSIDE SURFACE OF NON-LOCKING GATE (GATE WITHOUT SLIDE BARREL BOLT).

	<b>CITY OF CLOVIS</b>				DWG NO. <b>M-3</b>
	<b>TRASH ENCLOSURE GATE DETAILS</b>				REF. STANDARD DRAWING M-2
APPROVED BY:	NO.	REVISED	BY	APPROVALS	SCALE: NTS
CITY ENGINEER				CM DRU PUD	DRAWN BY: JA
DATE: 1/3/12					SHEET 1 OF 1

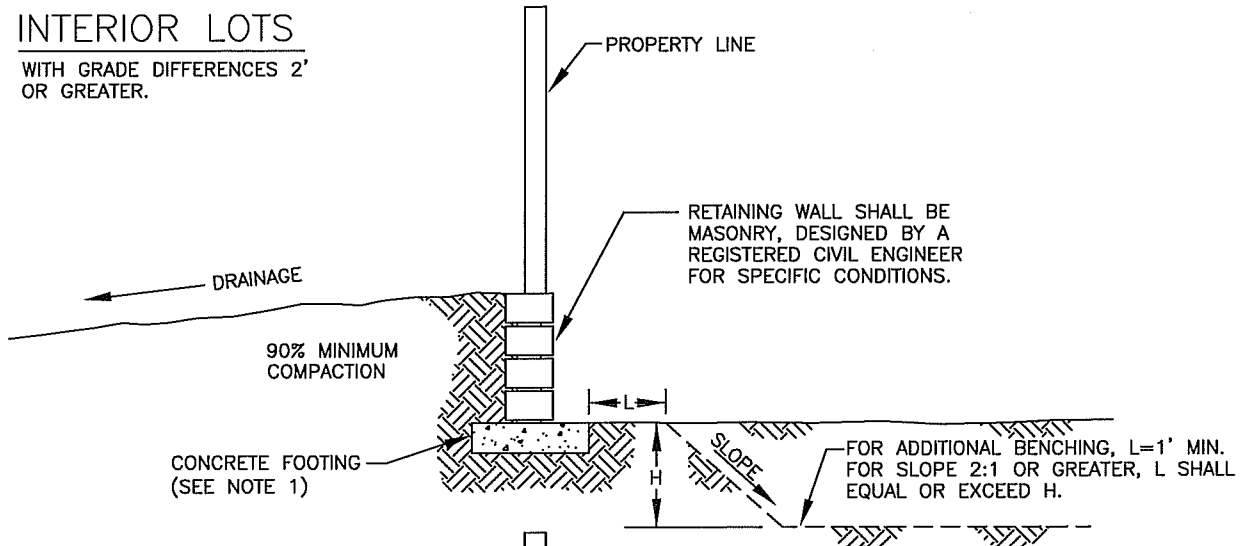
### A. INTERIOR LOTS

WITH GRADE DIFFERENCES  
LESS THAN 2'.



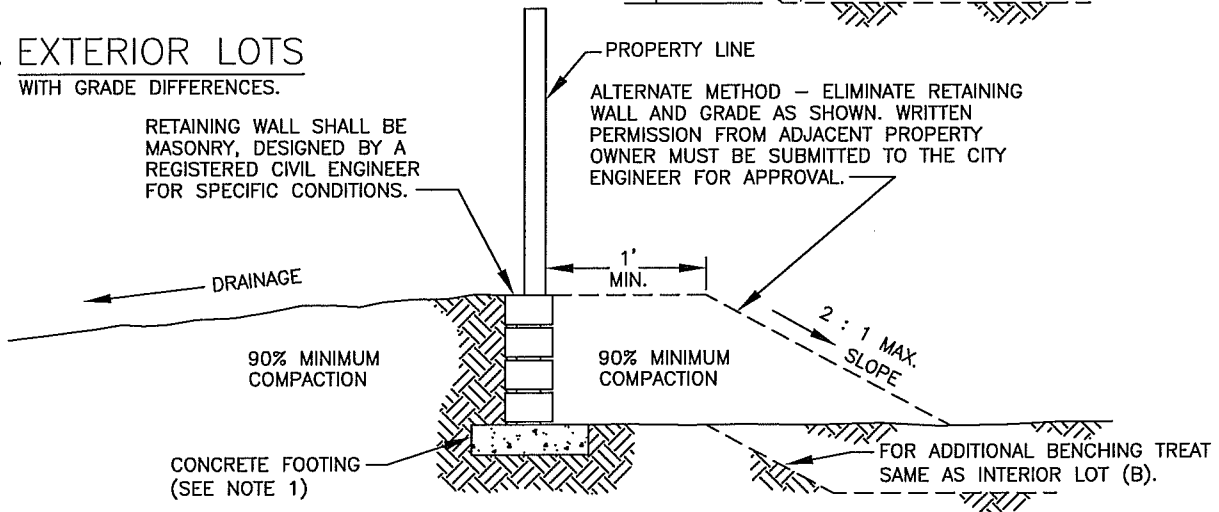
### B. INTERIOR LOTS

WITH GRADE DIFFERENCES 2'  
OR GREATER.



### C. EXTERIOR LOTS

WITH GRADE DIFFERENCES.



#### NOTES:

1. ALL CONCRETE FOOTINGS SHALL BE 2500 PSI @ 28 DAYS.
2. RETAINING WALL REQUIRES CITY BUILDING PERMIT, & MEET REQUIREMENTS OF STD. DRAWING M-1.



# CITY OF CLOVIS

## LOT LINE GRADING STANDARD

DWG NO.

M-4

REF.: STD. SPECIFICATIONS  
SECTION 19 & 81, & STD.  
DRAWING M-1

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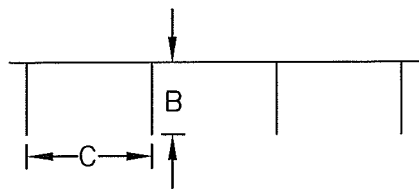
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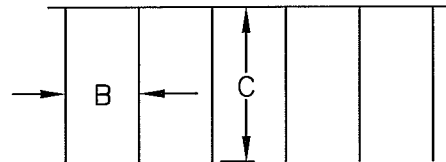
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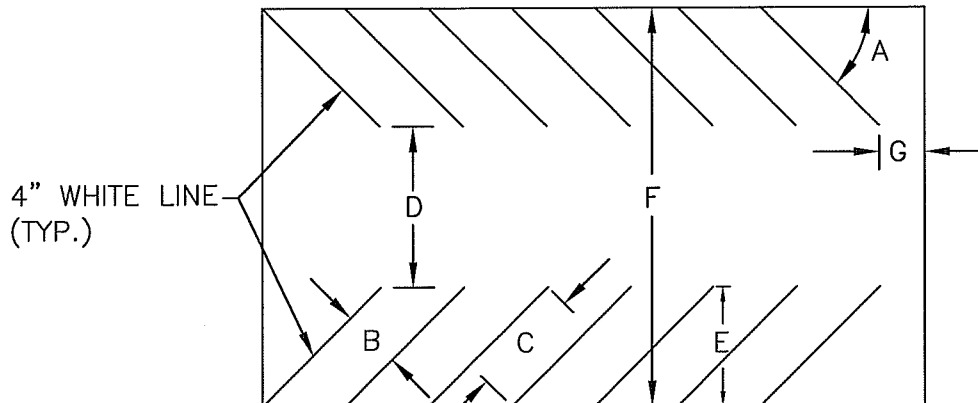
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0° PARKING



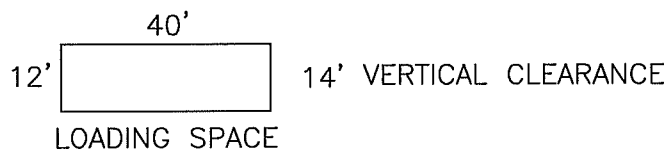
90° PARKING



DIAGONAL PARKING

A	B	C	D	E	F	G
0°	8'6"	22'	15'	-	32'	0'
45°	9'6"	20'	14'	21'	56'	5'
60°	9'6"	20'	17'	22'	61'	5'
90°	10'0"	20'	26'	-	66'	0'


A-PARKING ANGLE  
 B-STALL WIDTH  
 C-STALL LENGTH  
 D-AISLE WIDTH  
 E-STALL TO CURB  
 F-CURB TO CURB  
 G-PROPERTY LINE TO STALL

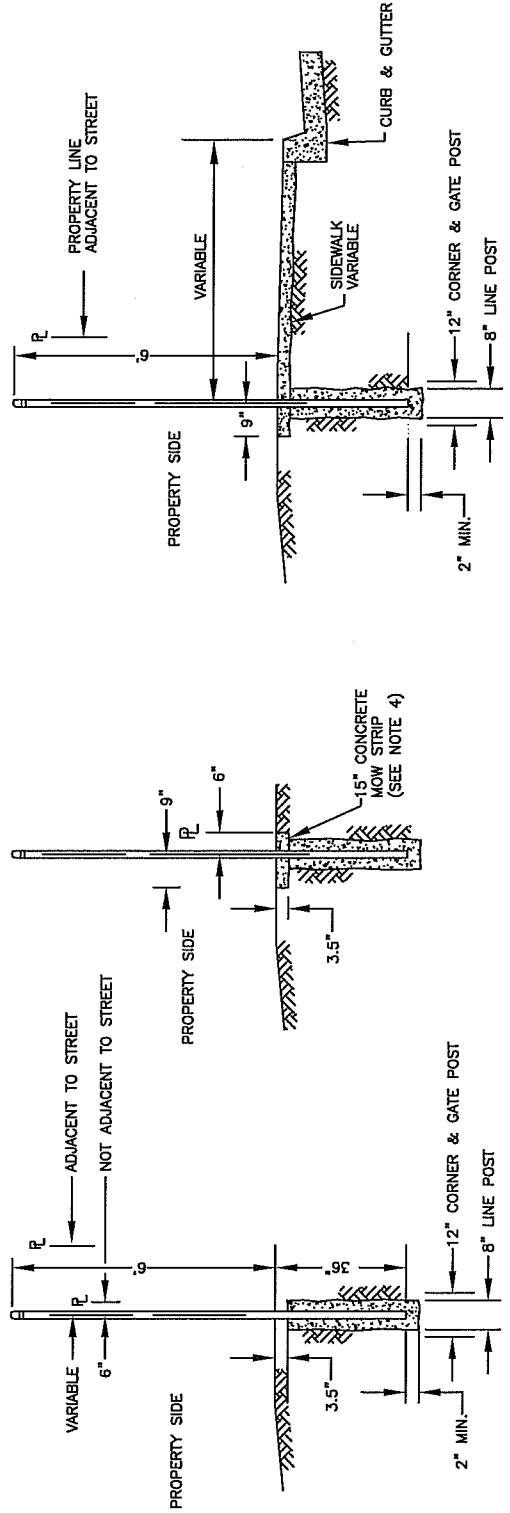
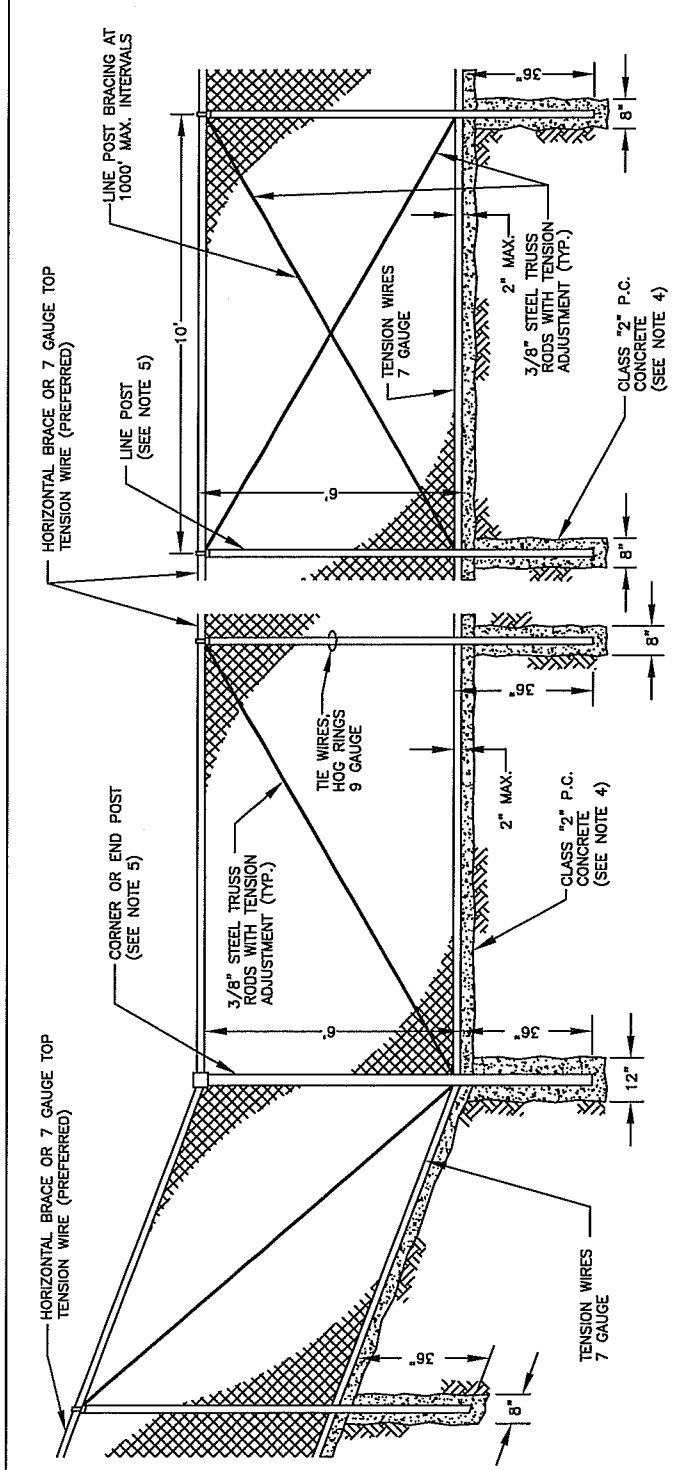


LOADING SPACE

**NOTE:**

THIS DRAWING CONTAINS NO PROVISIONS FOR DISABLED PARKING. THE DESIGNER SHALL INCORPORATE SUCH PROVISIONS COMPLYING WITH FEDERAL AND STATE STANDARDS.

	<h1>CITY OF CLOVIS</h1>				DWG NO. <h2>M-6</h2>
	<h2>PARKING LOT STANDARDS</h2>				REF. STD. SPECIFICATIONS SECTION 84
APPROVED BY:  CITY ENGINEER DATE:	NO.  	REVISED 07-17-09 01-18-11	BY BGJ BGJ	APPROVALS CM DRU PUD	SCALE: NTS  DRAWN BY: JA  SHEET 1 OF 1



FOOTING & SIDEWALK

FOOTING & MOW STRIP

FOOTING

NOTES:

1. ALL METAL SHALL BE GALVANIZED.
2. FENCE FABRIC SHALL BE 9 GAUGE, 2" MESH.
3. FABRIC EDGES SHALL BE KNUCKLED.
4. ALL CONCRETE SHALL BE CLASS 2.
5. LINE POST: 2-3/8" O.D., 3.65 LBS.-FT. CORNER AND END POSTS: 2-7/8" O.D., 5.79 LBS/FT. BRACES: 1-5/8" O.D., 2.27 LBS/FT.



# CITY OF CLOVIS

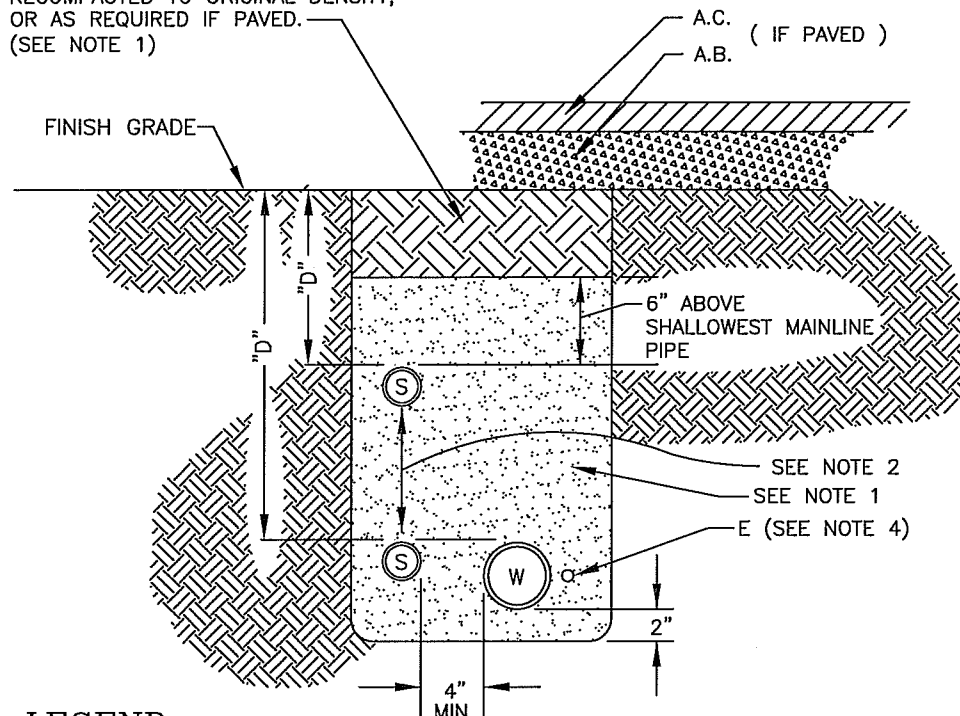
## CHAIN LINK FENCE

DWG NO.	M-8
REF.: STD. SPECIFICATIONS SECTION 80, & STD. DRAWING M-5B	
SCALE: NTS	
DRAWN BY: JA	
SHEET 1 OF 1	

APPROVED BY:	NO.	REVISED	BY	APPROVALS
CITY ENGINEER		03-18-09	BGJ	CM
DATE: 1/29/11		01-18-11	BGJ	DRU
				PUD



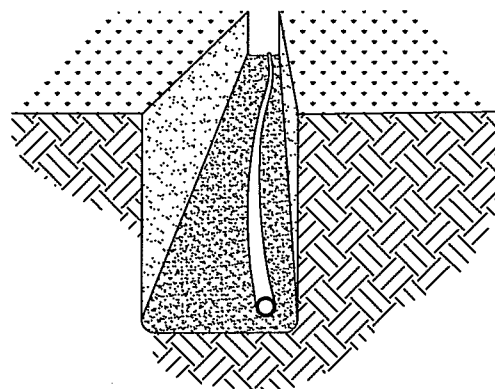
SALVAGED EXCAVATED FILL  
RECOMPACTED TO ORIGINAL DENSITY,  
OR AS REQUIRED IF PAVED.  
(SEE NOTE 1)



## LEGEND

- W WATER SUPPLY LINE  
S SPRINKLER LINE  
E ELECTRICAL WIRING, INCLUDES  
LOW VOLTAGE AND/OR 120 V. SERVICE

SNAKE PIPE A MINIMUM OF 1' PER 100' OF  
PIPE TO ALLOW EXPANSION AND CONTRACTION



## NOTES:

1. SAND BEDDING/APPROVED BACKFILL REQUIRED TO 6" ABOVE MAINLINE PIPE. REMAINDER MAY BE FILLED WITH RECOMPACTED EXCAVATED FILL DIRT FREE OF UNSUITABLE MATERIAL, ROCKS, AND HARDPAN.
2. SPRINKLER LINE COVER, "D" MAINLINES, D=24" MINIMUM MAINLINE WITH SLEEVE UNDER PAVEMENT, D=24" NON-PRESSURE ROTARY POP-UP LATERALS, D=18" NON-PRESSURE POP-UP SPRAY HEAD LINES, D=12"
3. WATER SUPPLY AND SPRINKLER LINES SHALL BE INSTALLED IN GALVANIZED IRON SLEEVING UNDER PAVEMENT OR HARDSCAPE. SLEEVES TO BE 2" GREATER I.D.
4. 120 V ELECTRICAL WIRING SHALL BE IN PVC SCHEDULE 40 TYPE II. LOW VOLTAGE WIRING (24 V) SHALL BE IN CONDUIT UNDER PAVEMENT OR HARDSCAPE, OR DIRECT BURIAL IN UNPAVED AREAS.



# CITY OF CLOVIS

## IRRIGATION TRENCHING

DWG NO.

P-1

REF: STD. SPECS  
SECTION 21, LANDSCAPE  
IRRIGATION SYSTEMS

APPROVED BY:

CITY ENGINEER

DATE:

NO.

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BY

APPROVALS

01-28-11

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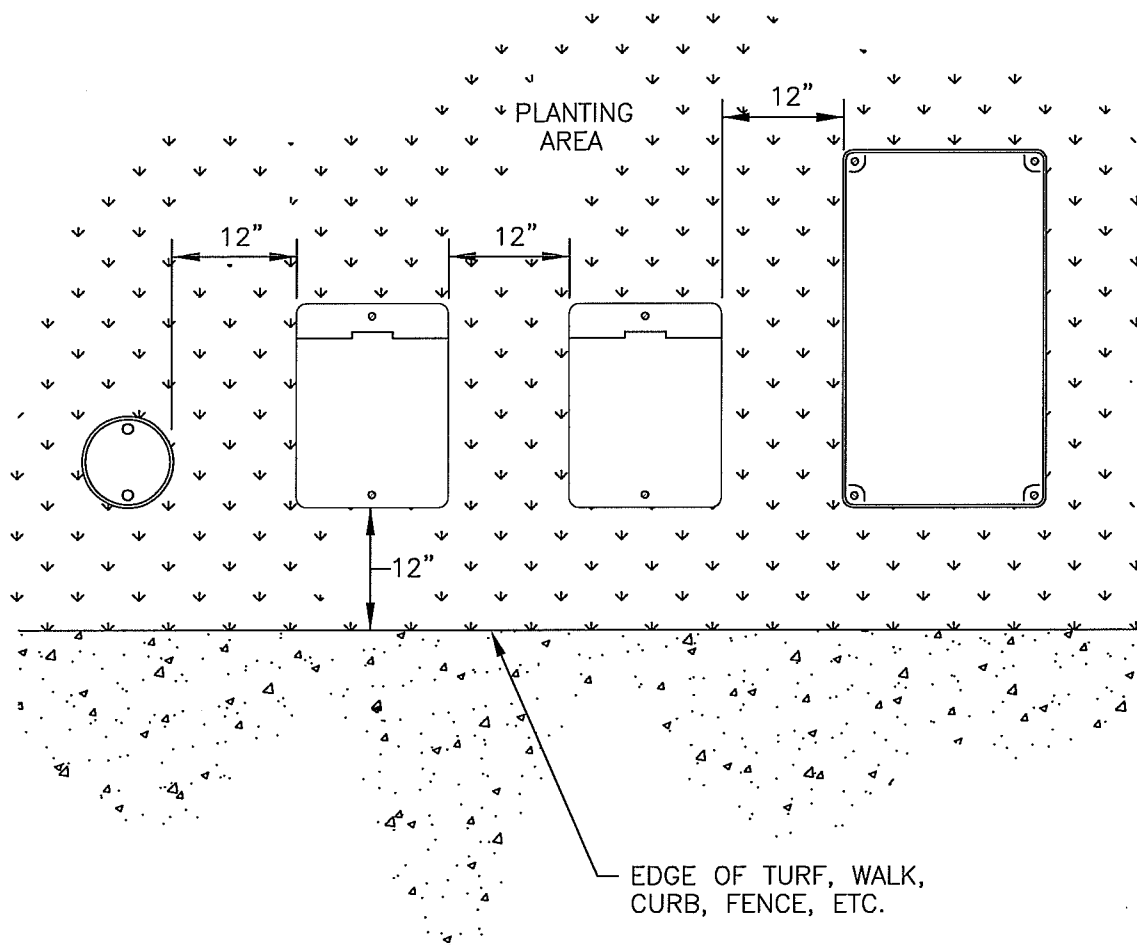
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SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1



### NOTES:

1. MAINTAIN 12" SEPARATION BETWEEN BOXES, AND FROM CONCRETE IMPROVEMENTS. BOXES TO BE PARALLEL TO EACH OTHER AND PERPENDICULAR TO CONCRETE IMPROVEMENTS.
2. WHEREVER POSSIBLE, BOXES SHOULD BE LOCATED IN GROUND COVER OR SHRUB AREAS RATHER THAN TURF AREAS.
3. TOP OF BOXES TO BE SET 1" ABOVE GROUND IN GROUND COVER AND SHRUB AREAS, OR EVEN WITH GROUND LEVEL IN TURF AREAS.
4. VALVES, ETC. TO BE CENTERED INSIDE BOXES TO FACILITATE SERVICING.
5. AVOID HEAVILY COMPACTING SOIL AROUND BOXES TO PREVENT COLLAPSING OR DEFORMING SIDES OF THE BOXES.



# CITY OF CLOVIS

## VALVE BOX LOCATION

DWG NO.

P-2

REF: STD. SPECS  
SECTION 21, LANDSCAPE  
IRRIGATION SYSTEMS

APPROVED BY:

NO.

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APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

01-19-11

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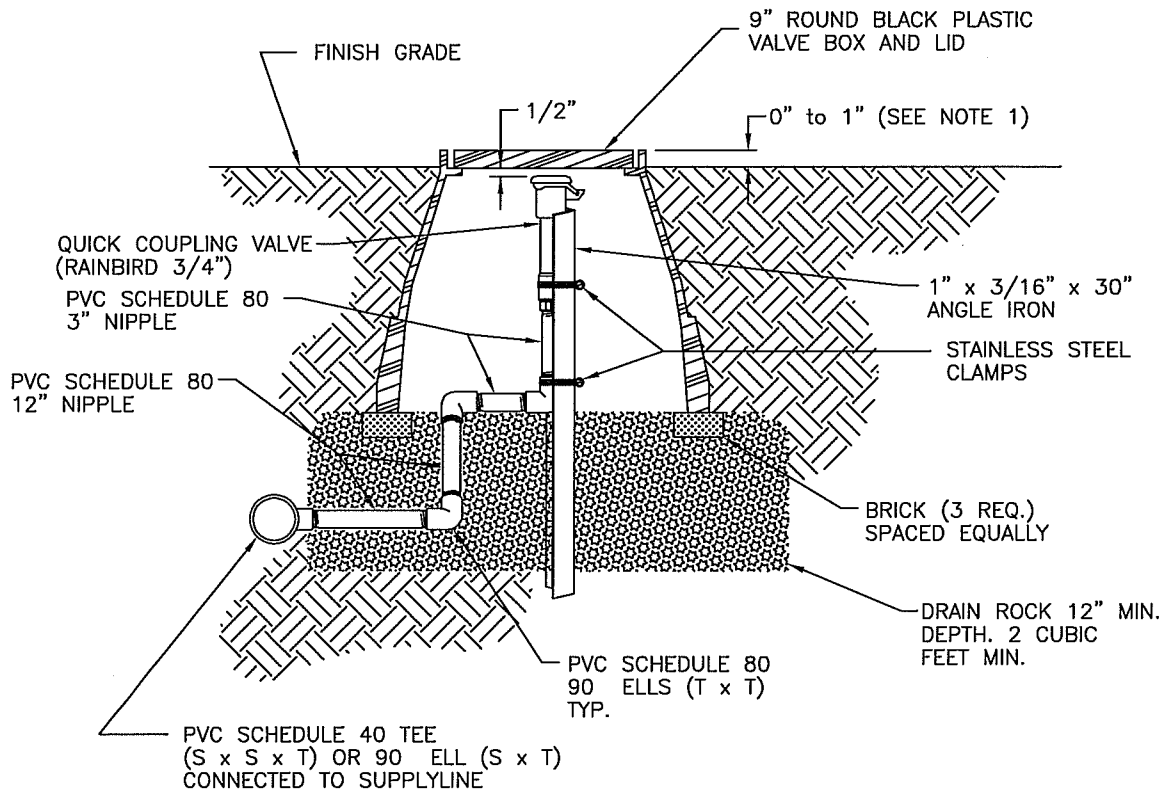
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DRAWN BY: JA

SHEET 1 OF 1



### NOTES:

1. SET TOP OF BOX EVEN WITH FINISH GROUND LEVEL IN TURF AREAS, 1" ABOVE GROUND LEVEL IN GROUND COVER AND SHRUB AREAS.



# CITY OF CLOVIS

## QUICK COUPLING VALVE

DWG NO.

P-4

REF: STD. SPECS  
SECTION 21, LANDSCAPE  
IRRIGATION SYSTEMS

APPROVED BY:

CITY ENGINEER

DATE:

*7/29/11*

NO.

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APPROVALS

01-28-11

BGJ

CM

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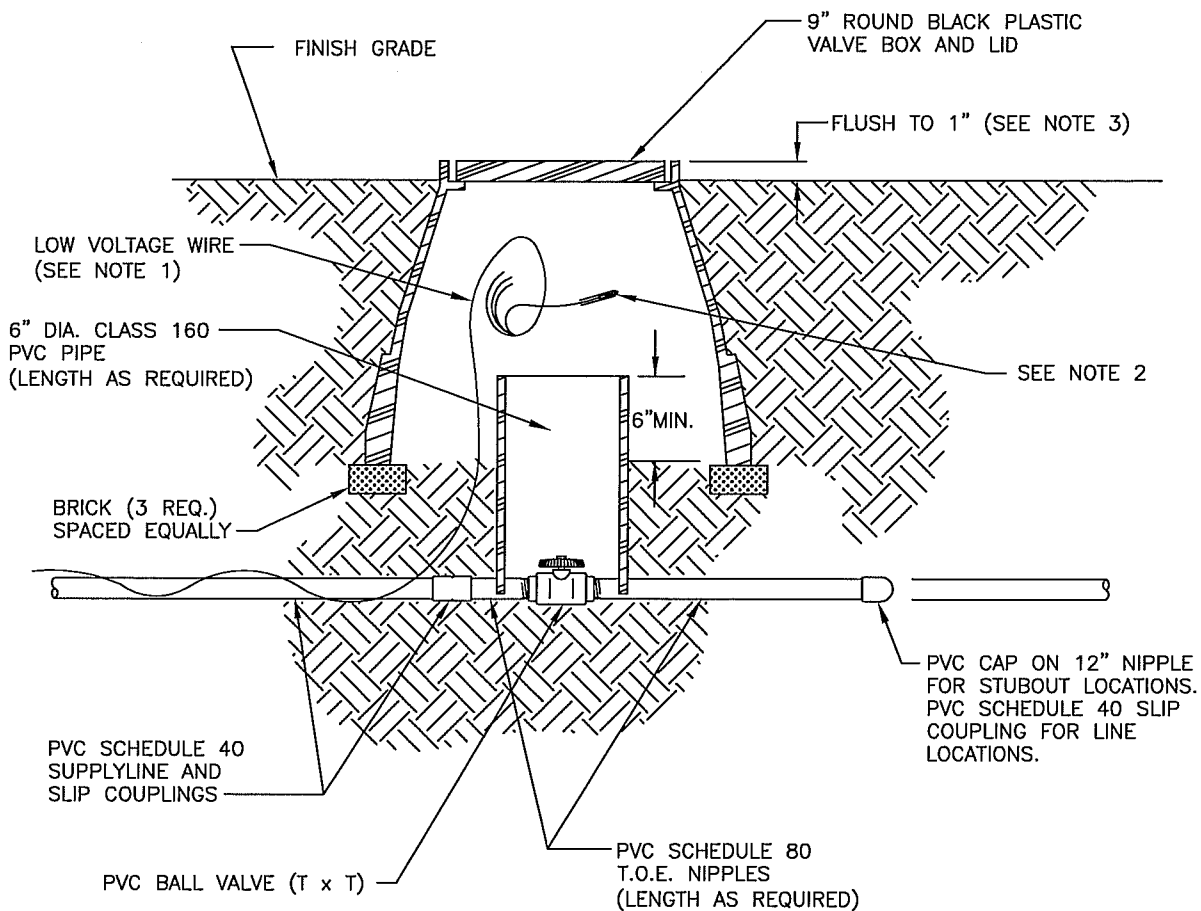
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SCALE: NTS

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SHEET 1 OF 1





# **NOTES:**

1. IN STUBOUT LOCATIONS, A MINIMUM OF 36" OF EXCESS LOW VOLTAGE WIRE TO BE COILED AND STORED FOR FUTURE USE.
2. IN STUBOUT LOCATIONS, THE COMMON WIRE SHALL BE TERMINATED WITH A WATERPROOF INSULATING CONNECTOR. SEE STANDARD DRAWING FOR WIRE CONNECTOR.
3. SET TOP OF BOX EVEN WITH FINISH GROUND LEVEL IN TURF AREAS, 1" ABOVE GROUND LEVEL IN GROUND COVER AND SHRUB AREAS.



# **CITY OF CLOVIS**

## **BALL VALVE**

DWG NO.

**P-5**

REF: STD. SPECS  
SECTION 21, LANDSCAPE  
IRRIGATION SYSTEMS

APPROVED BY:

CITY ENGINEER

DATE:

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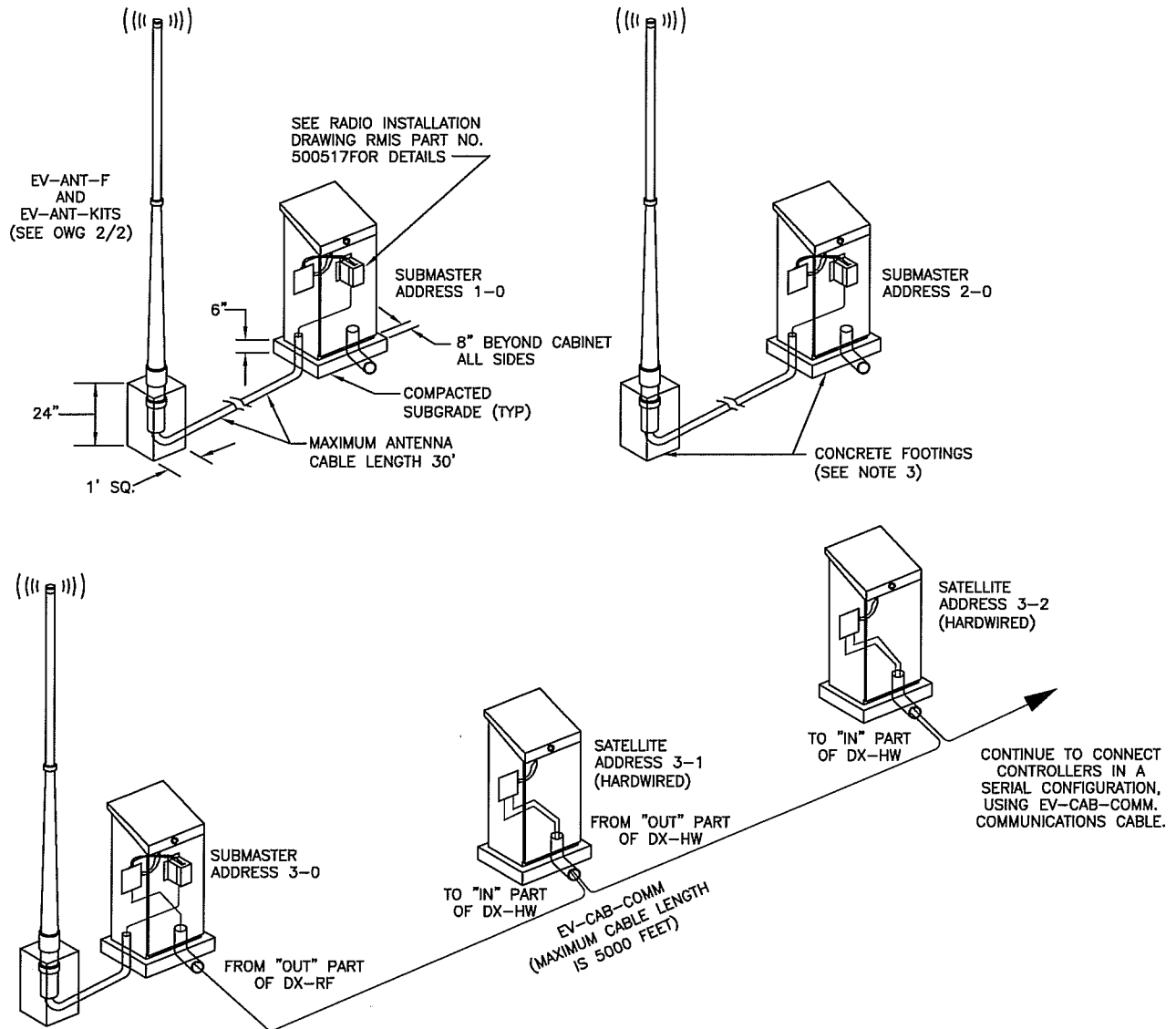
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SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1



# NOTES:

1. RADIO COMMUNICATIONS SYSTEM SHALL BE "RAINMASTER DX-2."
2. LOCATION AND INSTALLATION SHALL BE AS SHOWN ON THE PROJECT PLANS AND PER MANUFACTURER'S RECOMMENDATIONS.
3. FOOTINGS FOR RADIO PEDESTAL AND ANTENNA SHALL BE CL 2 CONCRETE.



## CITY OF CLOVIS

### IRRIGATION RADIO COMMUNICATIONS

DWG NO.

P-6

REF: STD. SPECS  
SECTION 21, LANDSCAPE  
IRRIGATION SYSTEMS

APPROVED BY:

CITY ENGINEER

DATE:

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SCALE: NTS

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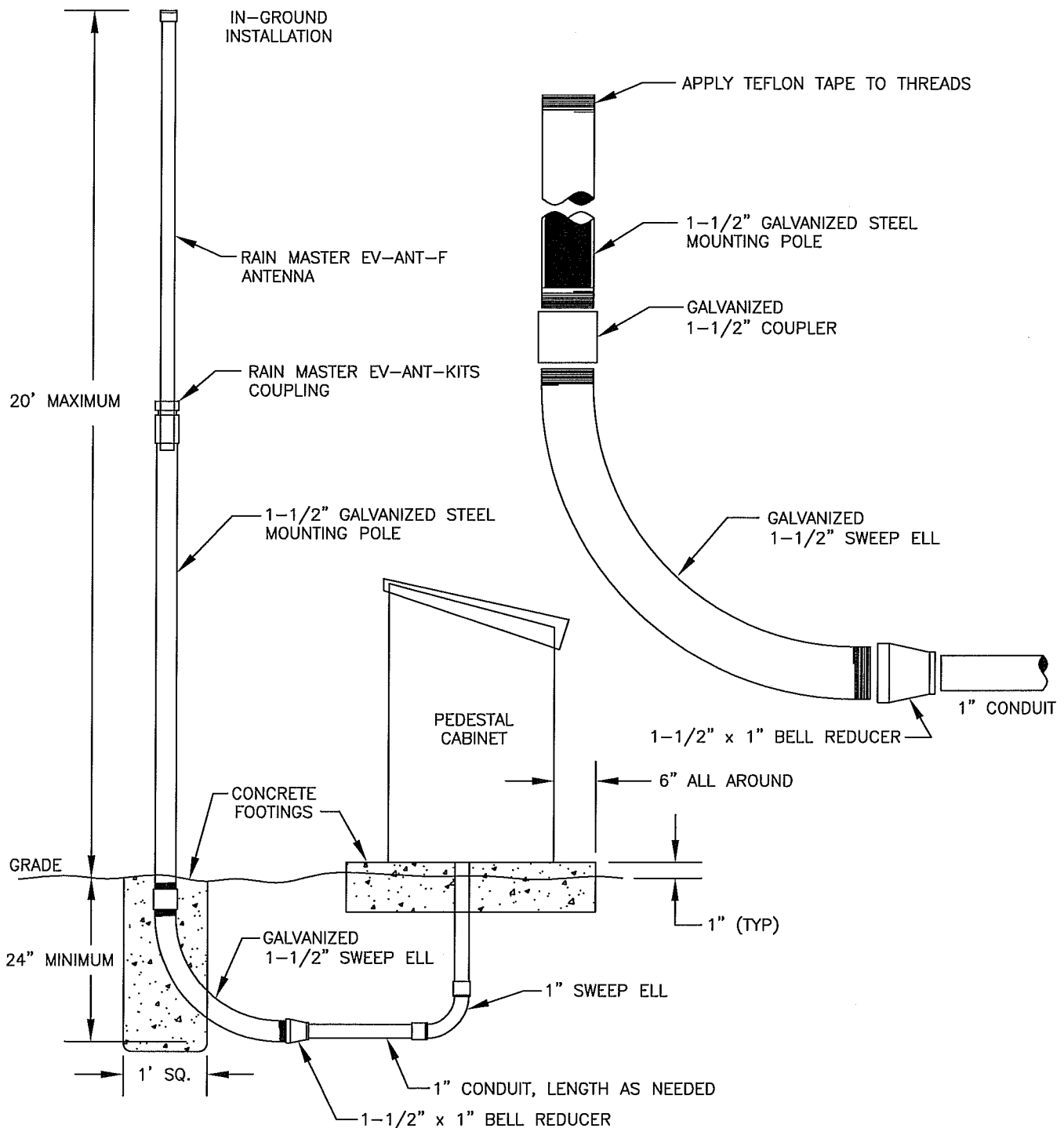
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SHEET 1 OF 1

10/25/11



**NOTES:**

1. ANTENNA SHALL BE "RAINMASTER DX-2" AS SHOWN.
2. FOOTINGS SHALL BE CLASS 2 CONCRETE.



# CITY OF CLOVIS

DWG NO.

**P-6A**

## IRRIGATION RADIO COMMUNICATION SYSTEM DETAIL

REF: STD. SPECS  
SECTION 21, LANDSCAPE  
IRRIGATION SYSTEMS

APPROVED BY:

CITY ENGINEER

DATE:

*Handwritten signature and date: 9/29/11*

NO.

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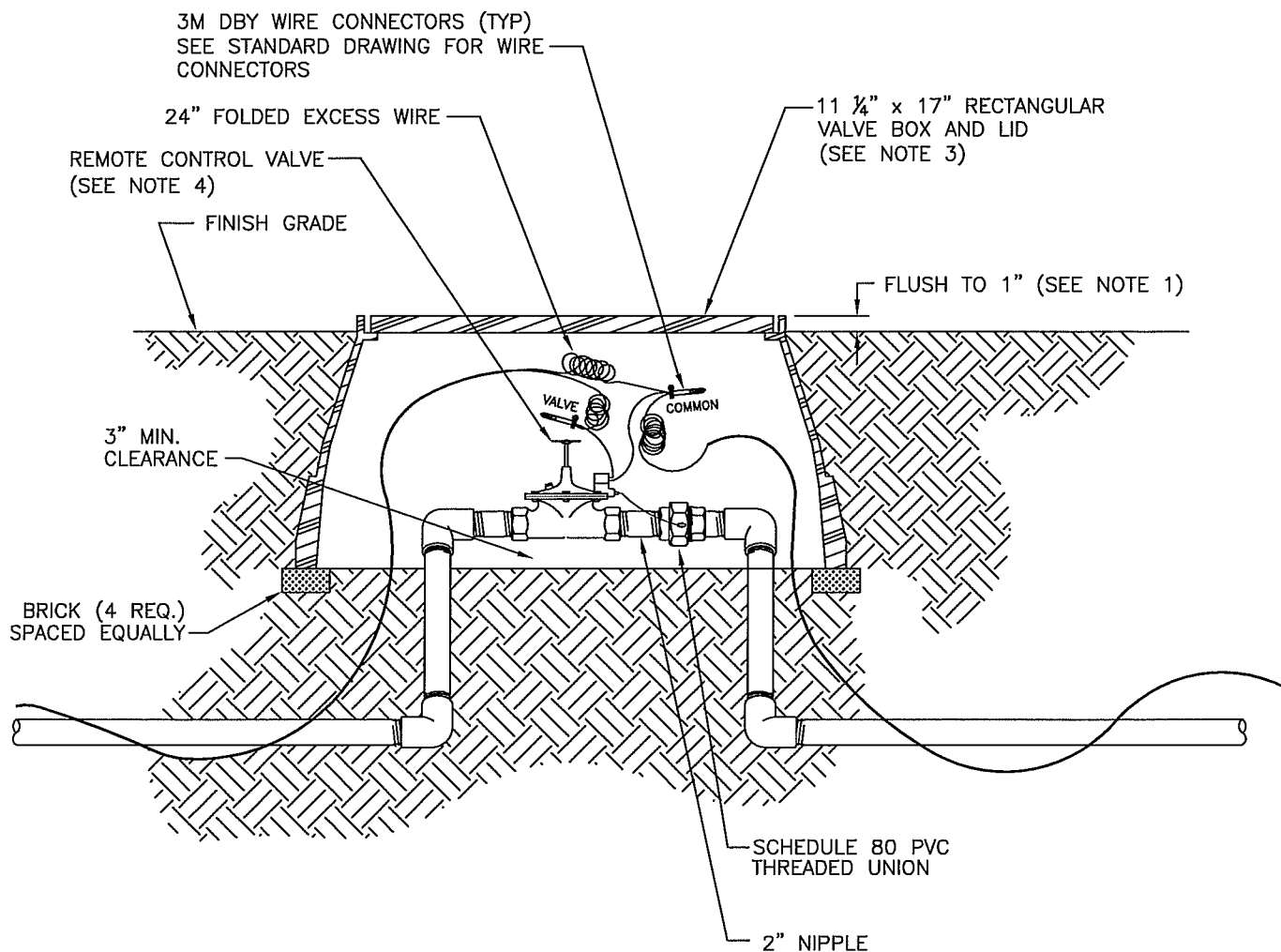
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SCALE: NTS

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SHEET 1 OF 1



### NOTES:

1. SET TOP OF BOX EVEN WITH FINISH GROUND LEVEL IN TURF AREAS; 1" ABOVE GROUND LEVEL IN GROUND COVER AND SHRUB AREAS.
2. ALL PIPING AND FITTINGS SHALL CONFORM TO STD. SPEC. SECTION 21.5 "MATERIALS".
3. VALVE BOX SHALL BE CHRISTY FIBERLYTE, 11 1/4" X 17".
4. REMOTE CONTROL VALVE SHALL BE IRRITROL SERIES 100 OR 102.
5. CONTROL WIRING SHALL BE DIRECT BURIAL AWG-UF TYPE; "HOT" WIRE NOT SMALLER THAN AWG NO. 14; COMMON WIRE NOT SMALLER THAN AWG NO. 12.



# CITY OF CLOVIS

## REMOTE CONTROL VALVE

DWG NO.  
**P-7**

STANDARD REF:  
N.A.

APPROVED BY:

CITY ENGINEER

DATE:

NO.

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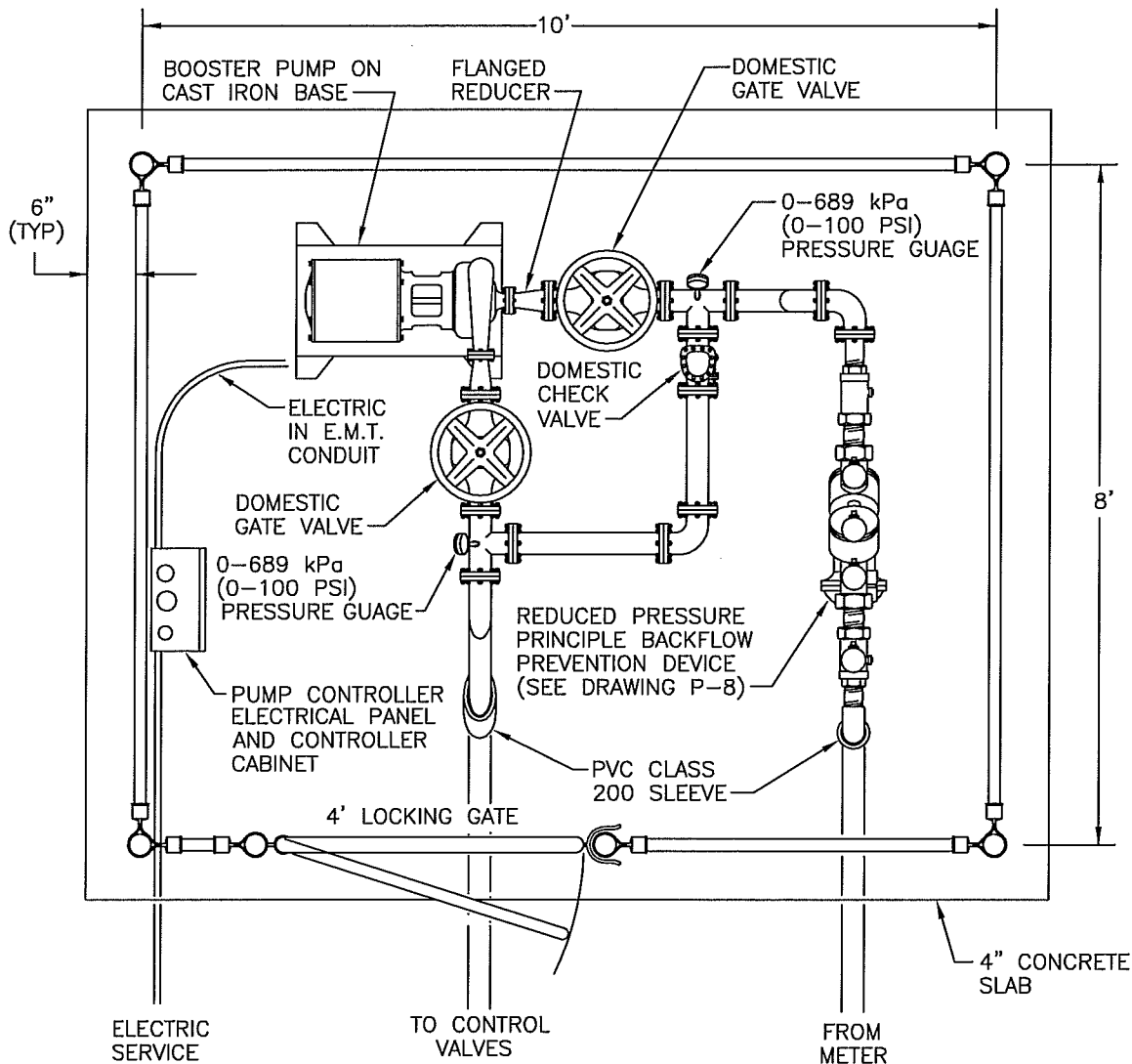
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SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1



### NOTES:

1. HARDWARE SIZES (SERVICE SIZE) TO BE DETERMINED BY ENGINEER. ALL HARDWARE DOWNSTREAM OF BACKFLOW PREVENTER TO HAVE FLANGED CONNECTIONS.
2. DOMESTIC GATE VALVES TO BE SUPPORTED ON 2" PIPE SUPPORTS MOUNTED W/FLANGES ON CONCRETE PAD. ADDITIONAL SUPPORTS MAY BE REQUIRED ON LARGE SERVICES.
3. ENCLOSURE TO CONSIST OF CHAINLINK FENCE WITH DECORATIVE VERTICAL SLATS AND LOCKING GATE. SEE DRAWINGS ST-34, ST-34A.
4. ABOVE GROUND PIPE AND FITTINGS TO BE WRAPPED AND TIED WITH INSULATION AND BURLAP.



# CITY OF CLOVIS

## BOOSTER PUMP LAYOUT

DWG NO.  
**P-9**

STANDARD REF:  
N.A.

APPROVED BY:

CITY ENGINEER

DATE:

NO.

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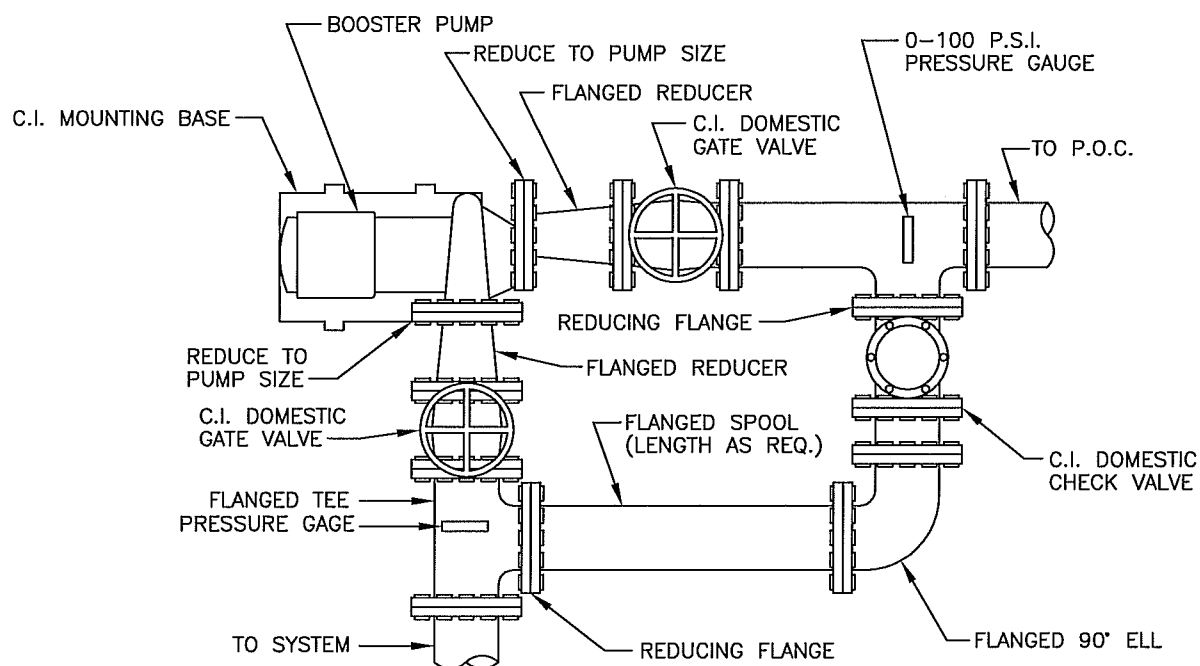
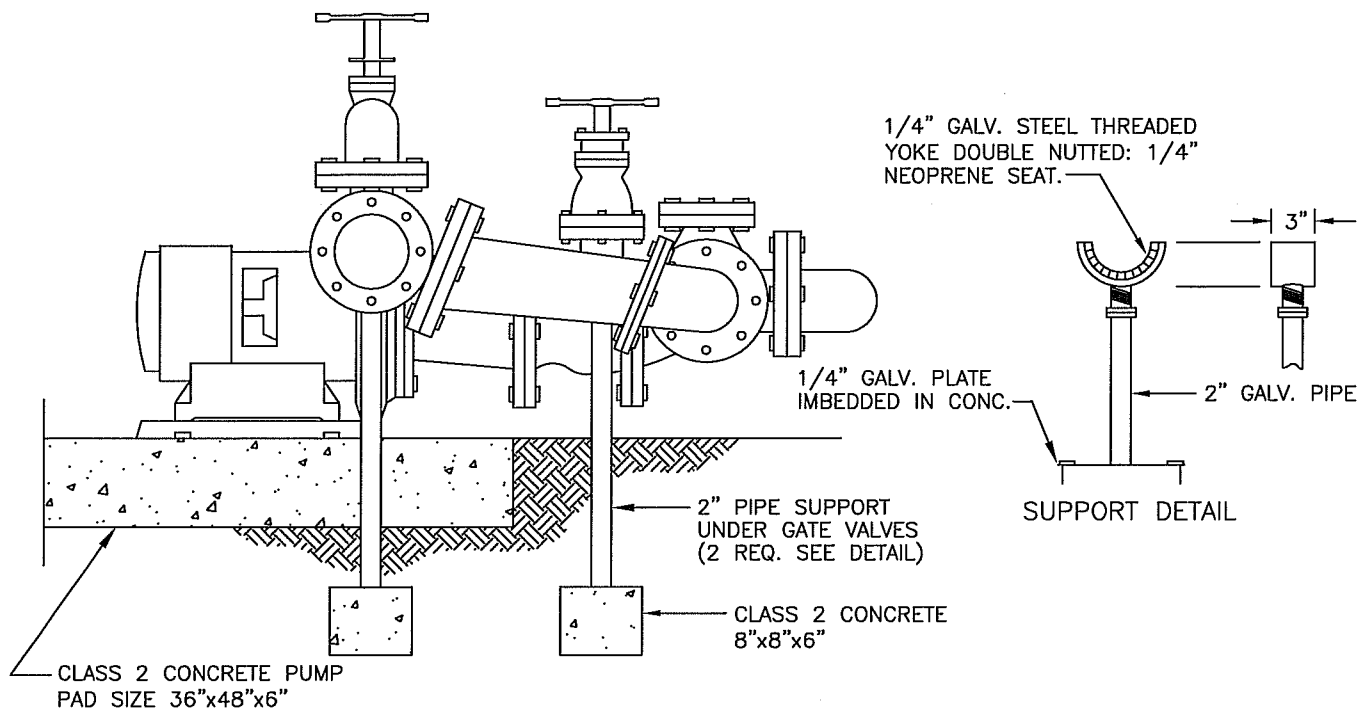
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SHEET 1 OF 1



# CITY OF CLOVIS

## FLANGED BOOSTER PUMP

DWG NO.  
**P-9A**

STANDARD REF:  
N.A.

APPROVED BY:

CITY ENGINEER

DATE:

7/29/11

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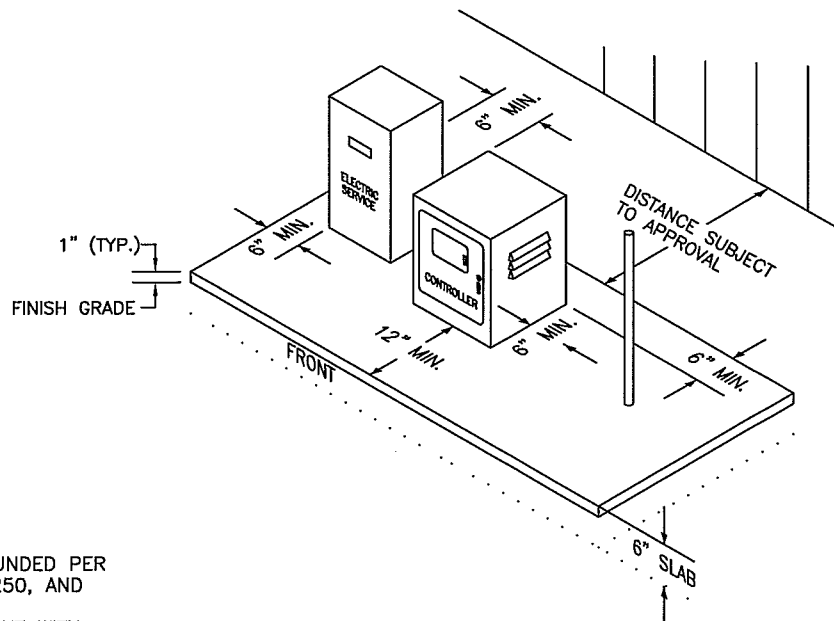
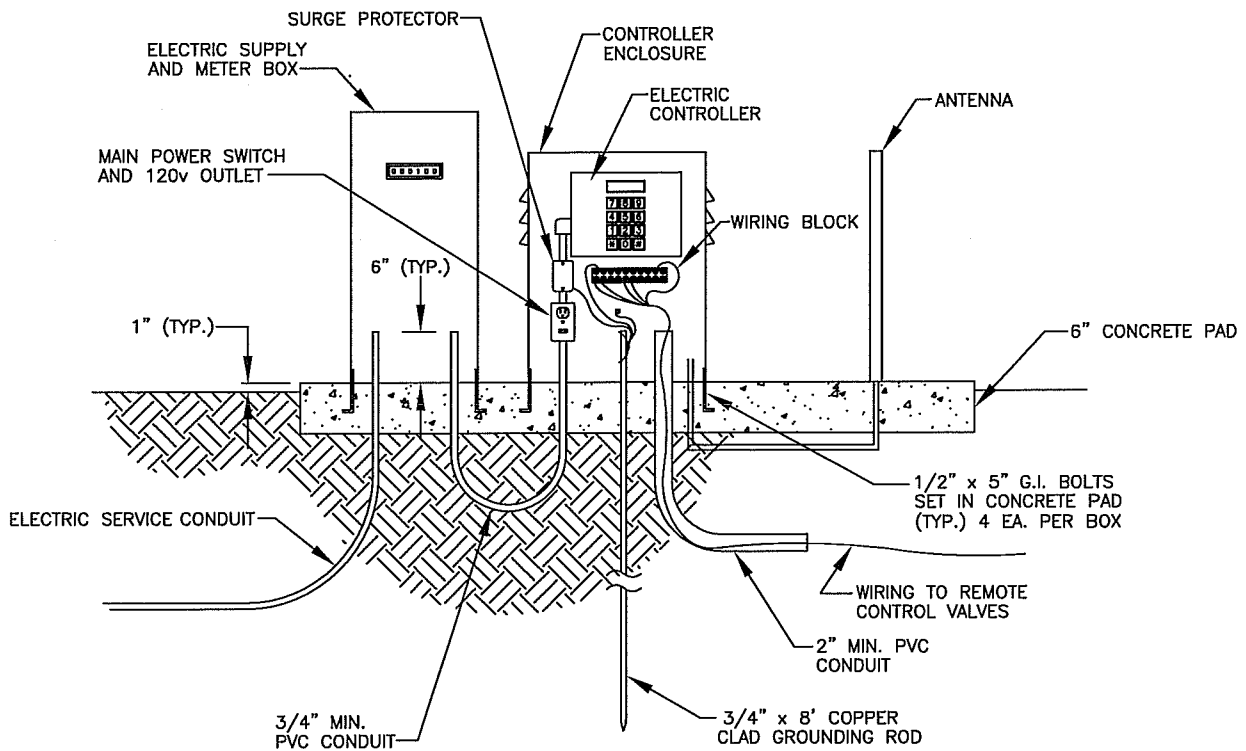
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SCALE: NTS

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SHEET 1 OF 1



**NOTES:**

1. CONTROLLER TO BE PROPERLY GROUNDED PER NATIONAL ELECTRIC CODE, ARTICLE 250, AND LOCAL REGULATIONS.
2. ENCLOSURES TO BE VANDAL RESISTANT WITH FACTORY PAINT AND LOCKABLE HINGED DOORS.
3. LOCATION TO BE APPROVED BY CLOVIS PARKS SECTION PRIOR TO INSTALLATION.



# CITY OF CLOVIS

## ELECTRIC SERVICE AND CONTROLLER

DWG NO.

**P-10**

REF: STD. SPECS  
SECTION 21, LANDSCAPE  
IRRIGATION SYSTEM

SCALE: NTS

DRAWN BY: JA

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CITY ENGINEER

DATE:

1/29/11

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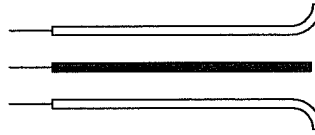
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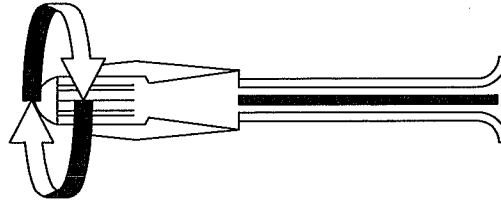
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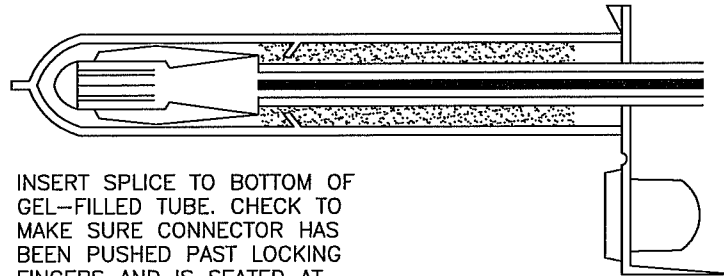
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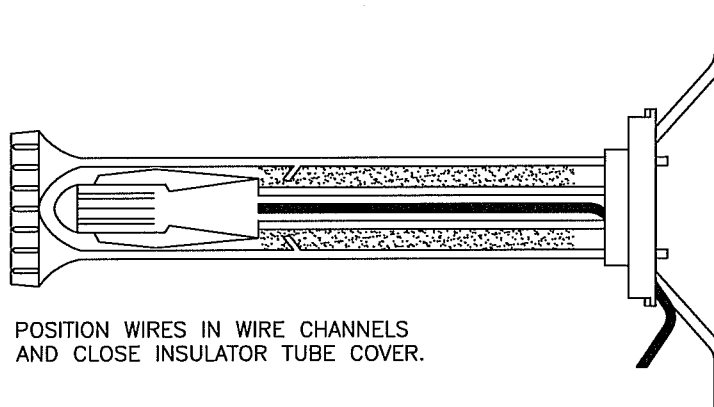
STEP 1: STRIP WIRES 1/2" FROM ENDS.



STEP 2: APPLY SCOTCHLOK Y SPRING CONNECTOR IN A CLOCKWISE DIRECTION.



STEP 3: INSERT SPLICE TO BOTTOM OF GEL-FILLED TUBE. CHECK TO MAKE SURE CONNECTOR HAS BEEN PUSHED PAST LOCKING FINGERS AND IS SEATED AT BOTTOM OF TUBE.



STEP 4: POSITION WIRES IN WIRE CHANNELS AND CLOSE INSULATOR TUBE COVER.

NOTE: MAXIMUM WIRE SIZES PER CONNECTOR ARE 3 - #14'S OR 2 - #12'S.



# CITY OF CLOVIS

## 3M DBY WIRE CONNECTOR

DWG NO.

P-11

REF: STD. SPECS  
SECTION 21, LANDSCAPE  
IRRIGATION SYSTEMS

APPROVED BY:

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SCALE: NTS

CITY ENGINEER

DATE:

01-27-11

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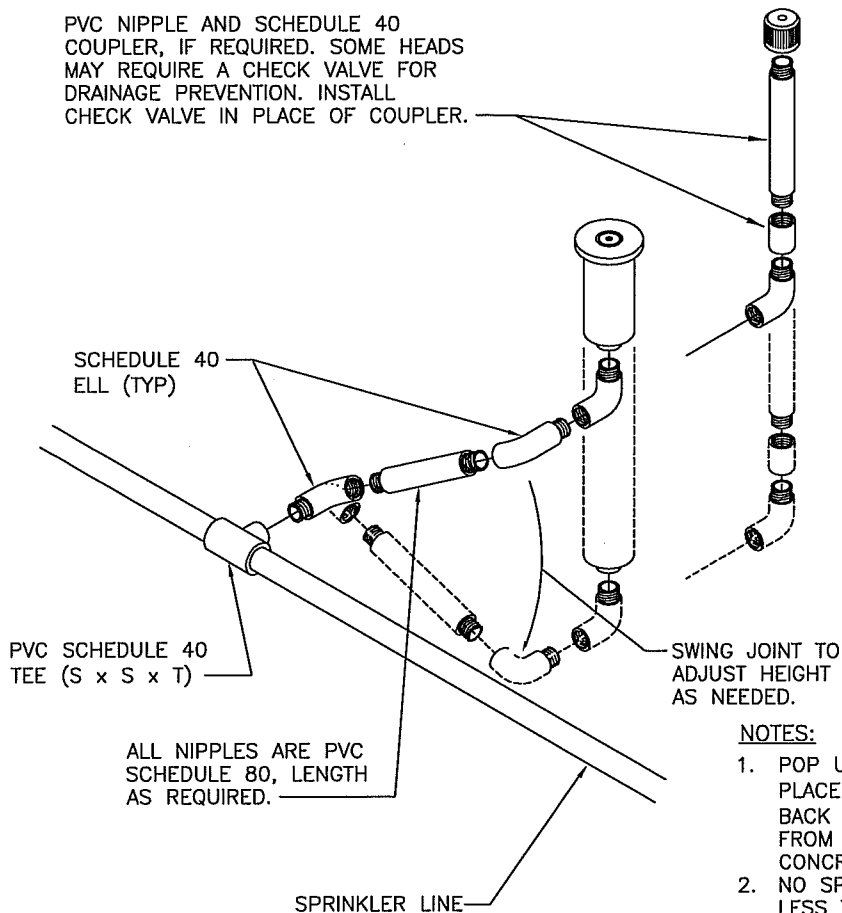
SHEET 1 OF 1



## SPRINKLER HEAD CLEARANCES

	HEIGHT ABOVE GROUND	CLEARANCE FROM...				
		BACK OF MEDIAN CURBS OR DECORATIVE CONCRETE	SIDEWALK, CURB, OR HEADERS	BUILDINGS	FENCES	HARDSCAPE ETC. IN TURF AREAS
EMITTER	2" ± ½"					
BUBBLER	2" ± ½"					
ROTOR POP-UP	1/2"	12"	2" ± ½"			
12" ROTOR POP-UP	1/2"	6"-12"	2"-6"	12"	6"	
12" POP-UP SPRAY	1/2"	12" ± 1"	6" ± ½"	12" ± 1"	12" ± 1"	
4" POP-UP SPRAY	1/2"	12" ± 1"	2" ± ½"	12" ± 1"	12" ± 1"	2" ± ½"
6" POP-UP SPRAY	1/2"	12" ± 1"	6" ± ½"	12" ± 1"	12" ± 1"	12" ± 1"

PVC NIPPLE AND SCHEDULE 40 COUPLER, IF REQUIRED. SOME HEADS MAY REQUIRE A CHECK VALVE FOR DRAINAGE PREVENTION. INSTALL CHECK VALVE IN PLACE OF COUPLER.



**NOTE:**  
PREFABRICATED SWING JOINTS  
ALLOWED PER APPROVAL OF CITY  
ENGINEER/PARKS DIVISION

**NOTES:**

1. POP UP SPRAY HEADS SHALL BE PLACED A MINIMUM OF 1' FROM BACK OF MEDIAN CURB OR 4" FROM BACK OF DECORATIVE CONCRETE.
2. NO SPRAY HEADS IN PLANTERS LESS THAN 8 FEET WIDE.
3. NO SPRAY HEADS CLOSER THAN 24 INCHES TO HARDSCAPE THAT DRAINS OFFSITE



# CITY OF CLOVIS

## SPRINKLER INSTALLATION

DWG NO.

**P-12**

REF: STD. SPECS  
SECTION 21, LANDSCAPE  
IRRIGATION SYSTEMS

APPROVED BY:

CITY ENGINEER

DATE:

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APPROVALS

SCALE: NTS

01-27-11

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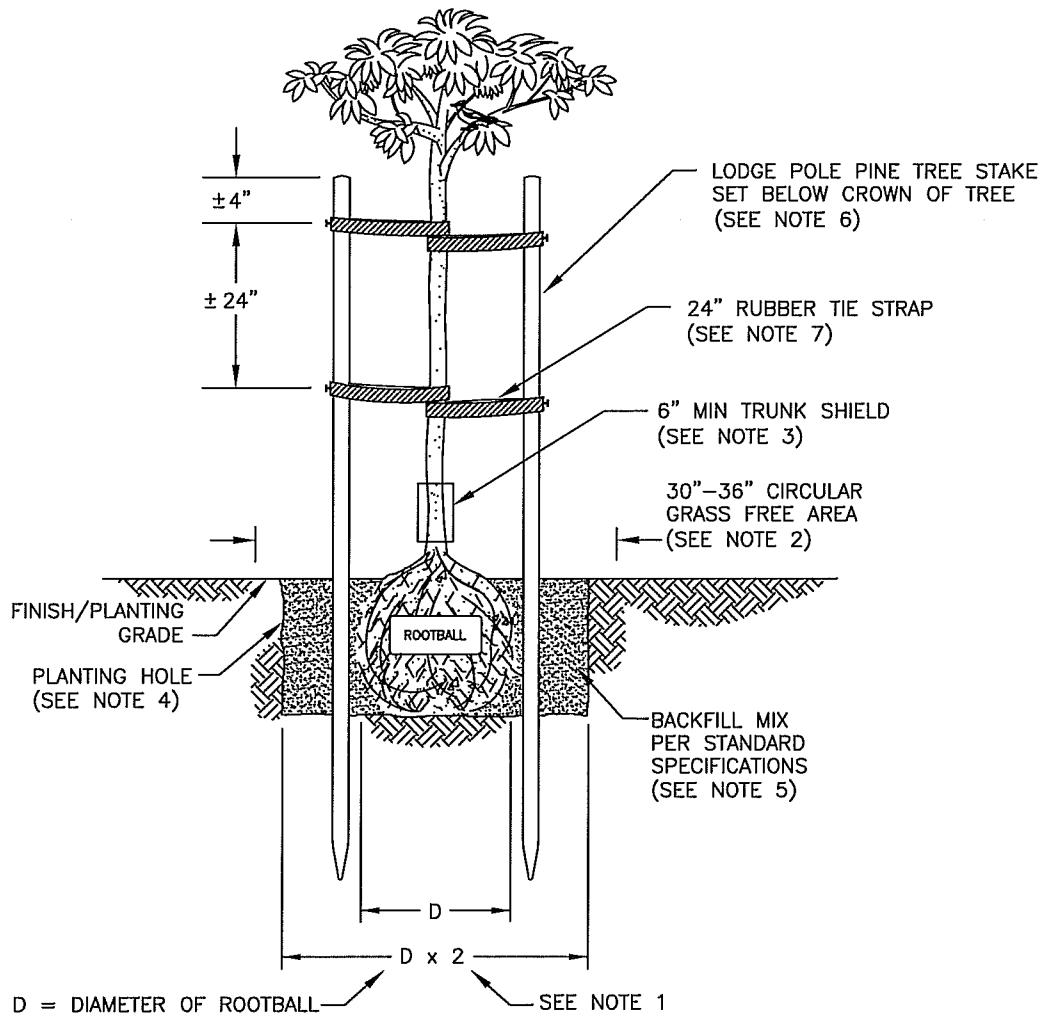
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SHEET 1 OF 1



## NOTES:

1. DIG PLANTING HOLE TWICE THE DIAMETER OF THE ROOTBALL. IF IMPERVIOUS MATERIAL IS ENCOUNTERED , AUGER 12" DIAMETER DRAINAGE HOLE PER STANDARD SPECIFICATIONS.
2. PROVIDE 30"-36" DIAMETER CIRCULAR GRASS FREE AREA, CENTERED ON TREE.
3. PROVIDE 6" HIGH (MIN) TRUNK SHIELD.
4. SET TREE WITH TOP OF ROOTBALL APPROXIMATELY 1" ABOVE PLANTING GRADE. IF NECESSARY, ADJUST BOTTOM OF HOLE WITH BACKFILL MIX TO RAISE ROOTBALL. SCORE SIDES OF ROOTBALL APPROXIMATELY 1" DEEP TO PREVENT CIRCLING ROOTS.
5. FILL PLANTING HOLE TO PLANTING GRADE WITH BACKFILL MIX AS SPECIFIED, COMPACT LIGHTLY.
6. FOR DECIDUOUS TREES, DRIVE 2 TREE STAKES, 1 SOUTHWEST AND 1 NORTHEAST OF TREE. STAKES SHOULD BE 12" FROM TREE AND SET WITH TOP BELOW CROWN OF TREE. FOR CONIFERS, DRIVE STAKE NORTHWEST OF TREE.
7. SUPPORT TREE USING RUBBER TIE STRAPS NAILED TO TREE STAKES.



# CITY OF CLOVIS

## TREE PLANTING-TURF AREAS

DWG NO.

P-13

REF:  
STD. SPECIFICATIONS  
SECTION 20  
LANDSCAPE PLANTING

SCALE: NTS

DRAWN BY: JA

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APPROVED BY:

CITY ENGINEER

DATE:

NO.

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APPROVALS

01-19-11

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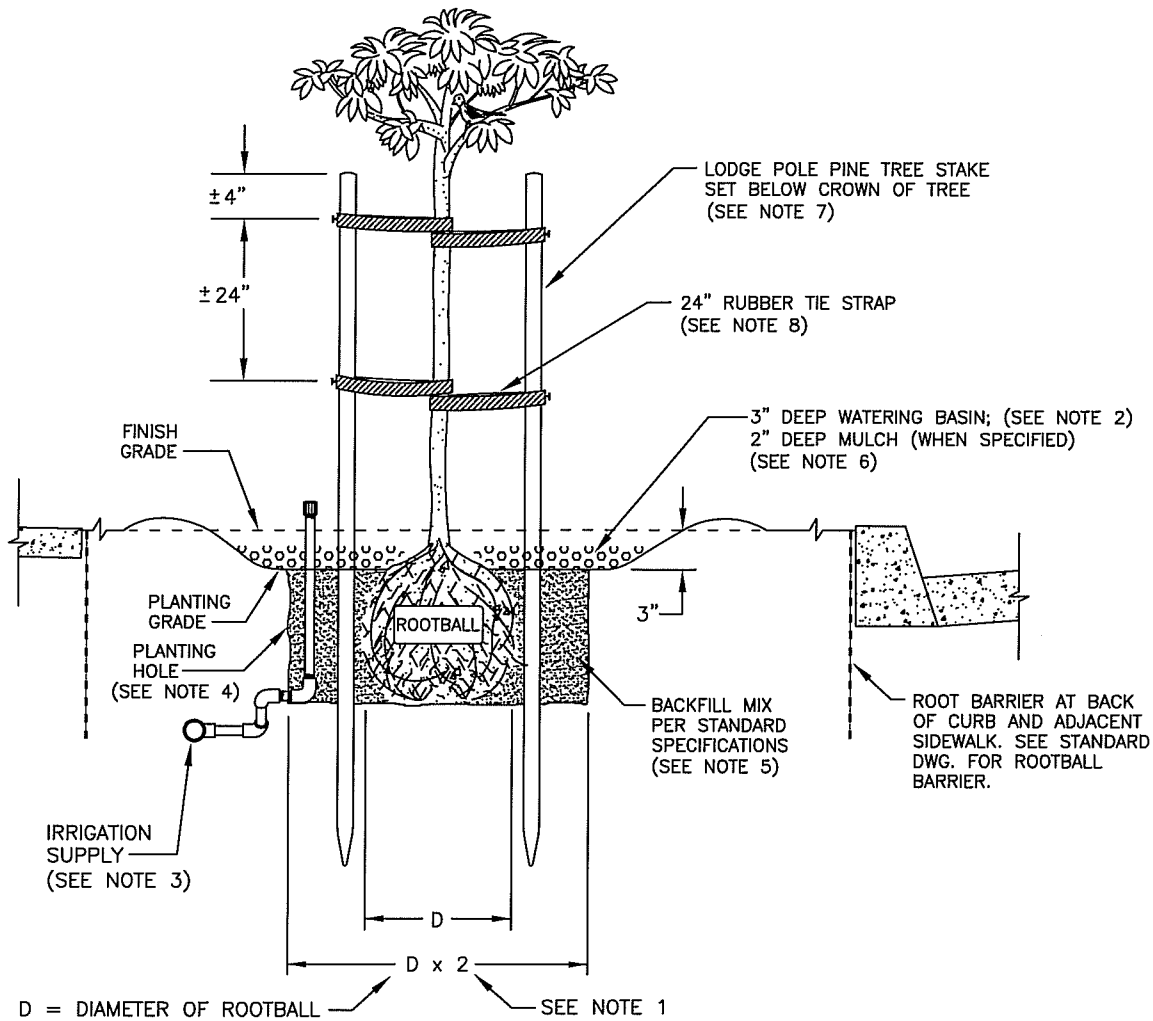
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### NOTES:

1. DIG PLANTING HOLE TWICE THE DIAMETER OF THE ROOTBALL. IF IMPERVIOUS MATERIAL IS ENCOUNTERED , AUGER 12" DIAMETER DRAINAGE HOLE PER STANDARD SPECIFICATIONS.
2. FORM A 3" DEEP CIRCULAR BASIN AROUND TREE.
3. INSTALL IRRIGATION FACILITIES AS SPECIFIED.
4. SET TREE WITH TOP OF ROOTBALL APPROXIMATELY 1" ABOVE PLANTING GRADE. IF NECESSARY, ADJUST BOTTOM OF HOLE WITH BACKFILL MIX TO RAISE ROOTBALL. SCORE SIDES OF ROOTBALL APPROXIMATELY 1" DEEP TO PREVENT CIRCLING ROOTS.
5. FILL PLANTING HOLE TO PLANTING GRADE WITH BACKFILL MIX AS SPECIFIED, COMPACTING LIGHTLY.
6. COVER WITH 2" OF MULCH WHEN SPECIFIED.
7. FOR DECIDUOUS TREES, DRIVE 2 TREE STAKES, 1 SOUTHWEST AND 1 NORTHEAST OF TREE. STAKES SHOULD BE 12" FROM TREE AND SET WITH TOP BELOW CROWN OF TREE. FOR CONIFERS, DRIVE 1 STAKE NORTHWEST OF TREE.
8. SUPPORT TREE USING RUBBER TIE STRAPS NAILED TO TREE STAKES.



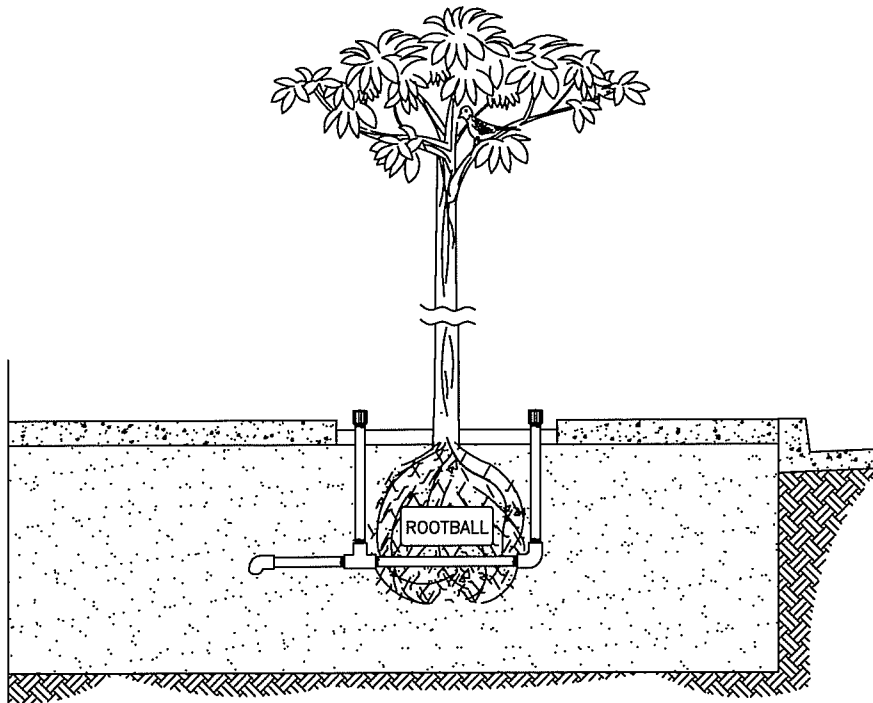
# CITY OF CLOVIS

DWG NO.  
**P-14**

## TREE PLANTING - NON TURF AREAS WITH ROOT BARRIER

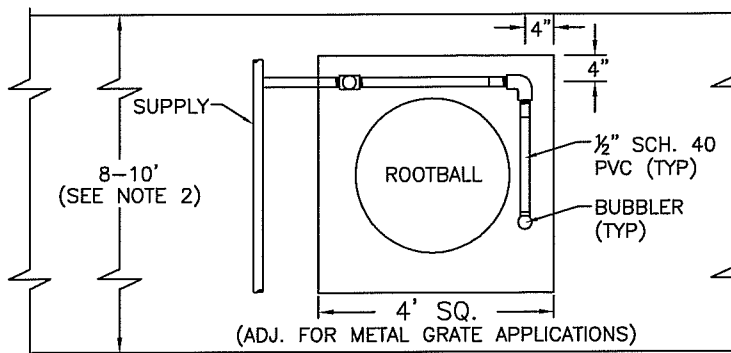
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STD. SPECIFICATIONS  
SECTION 20  
LANDSCAPE PLANTING

APPROVED BY:	NO.	REVISED	BY	APPROVALS	SCALE: NTS
CITY ENGINEER		01-27-11	BGJ	CM	DRAWN BY: JA
DATE: 9/19/11		06-15-11	BGJ	DRU	
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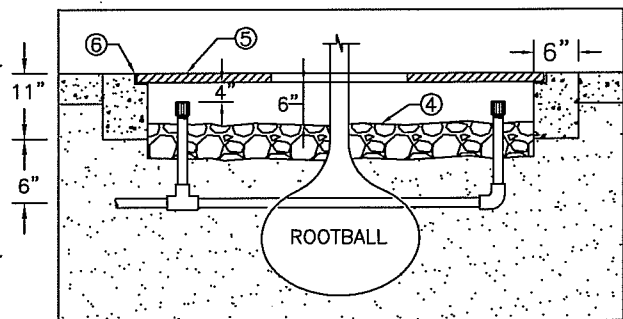


PROFILE VIEW (NTS)

FOR METAL TREE GRATE  
APPLICATIONS—SEE DETAIL



PLAN VIEW (NTS)



METAL GRATE DETAIL (NTS)

**NOTES:**

1. STRUCTURAL SOIL SHALL BE "ROSENBALM ROCKERY'S" OR APPROVED EQUAL.
2. THE ACTUAL LENGTH, WIDTH AND DEPTH OF STRUCTURAL SOIL WILL BE DETERMINED BY THE DESIGN ENGINEER.
3. FOR NON-GRATE APPLICATIONS COVER S. SOIL WITH 3" THICK BARK MULCH.
4. FOR GRATE APPLICATIONS, COVER S. SOIL WITH 3" OF 1" RIVER ROCK.
5. METAL GRATE SHALL BE EAST JORDAN IRON WORKS MODEL V-8954, ADA SQUARE SERIES, 48" SQUARE WITH 16" DIAMETER TREE OPENINGS, 2 PIECE STEEL FRAME, OR APPROVED EQUAL. (800-626-4653, <http://ejw.com>)
6. 1"x6" CLASS 2 CONCRETE FOOTING; NOTCH 1½" SEAT WITH DEPTH TO PROVIDE FLUSH FIT FOR GRATE. INSTALL FOOTING ALL 4 SIDES.



# CITY OF CLOVIS

DWG NO.

**P-15**

## SIDEWALK TREE WELL

REF. STANDARD SPEC  
SECTION 20  
LANDSCAPE PLANTING

APPROVED BY:

CITY ENGINEER

DATE:

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APPROVALS

SCALE: NTS

01-27-11

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DRAWN BY: JA

02-16-11

BGJ

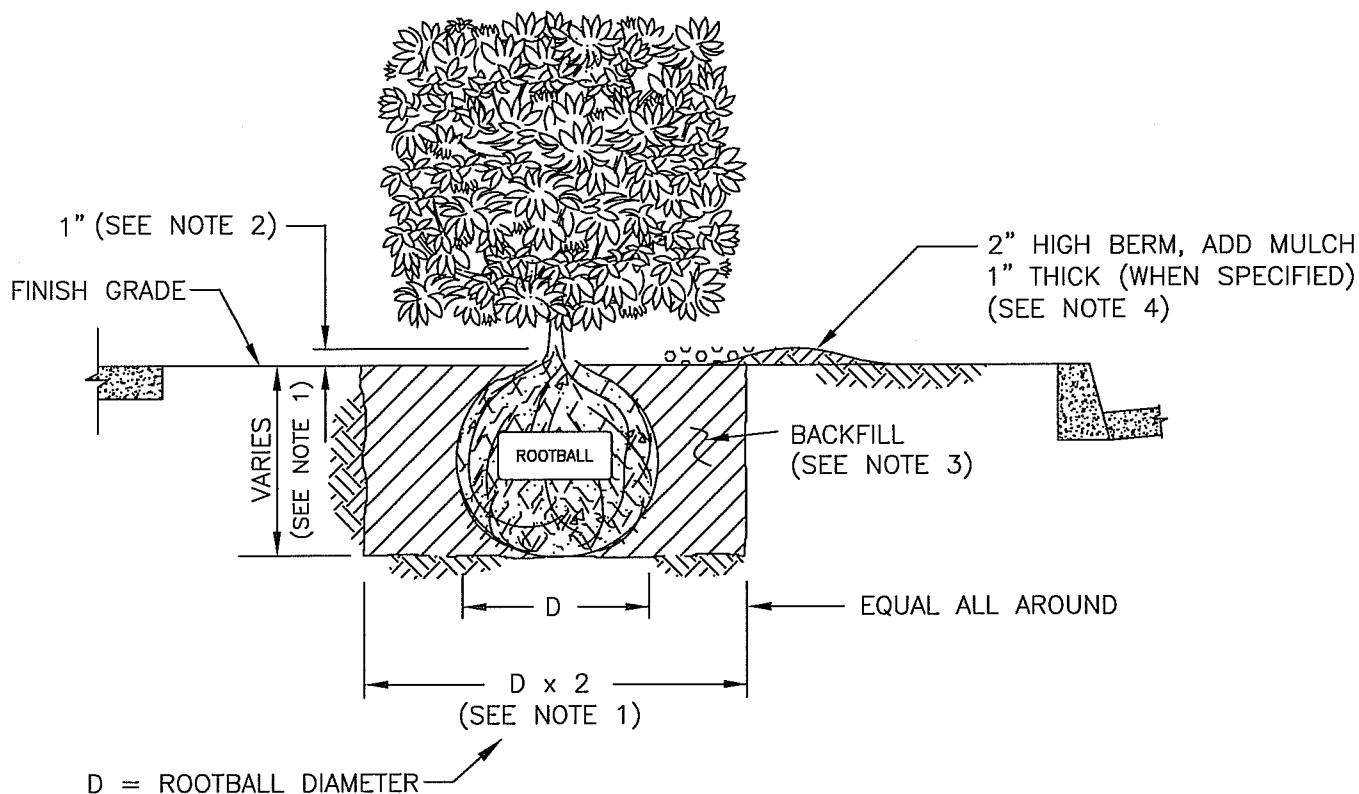
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SHEET 1 OF 1



## NOTES:

1. DIG PLANTING HOLE TWICE THE DIAMETER OF THE ROOTBALL TO DEPTH EQUAL TO PLANNED DEPTH OF ROOTBALL. IF IMPERVIOUS MATERIAL IS ENCOUNTERED, AUGER 12" DIAMETER DRAINAGE HOLE PER STANDARD SPECIFICATIONS.
2. SET SHRUB WITH TOP OF ROOTBALL APPROXIMATELY 1" ABOVE FINISH GRADE. IF NECESSARY, ADJUST BOTTOM OF HOLE WITH BACKFILL TO RAISE ROOTBALL. CUT SIDES ROOTBALL TO MIDDLE OF ROOTBALL AT 3 EQUIVALENT LOCATIONS TO PREVENT CIRCLING ROOTS.
3. BACKFILL HOLE TO FINISH GRADE WITH NATIVE SOIL REMOVED FROM PLANTING HOLE; REMOVE ROCKS, HARDPAN, DELETERIOUS MATERIAL. COMPACT LIGHTLY.
4. WHEN SPECIFIED, COVER WITH 1" THICK MULCH LAYER; KEEP CLEAR OF TRUNK BASE; FORM A BERMED 2" DEEP CIRCULAR BASIN AROUND SHRUB.



# CITY OF CLOVIS

## SHRUB PLANTING

DWG NO.  
**P-16**

REF. STANDARD SPEC  
SECTION 20  
LANDSCAPE PLANTING

SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1

APPROVED BY:

CITY ENGINEER

DATE:

NO.

REVISED

BY

APPROVALS

01-19-11

BGJ

CM

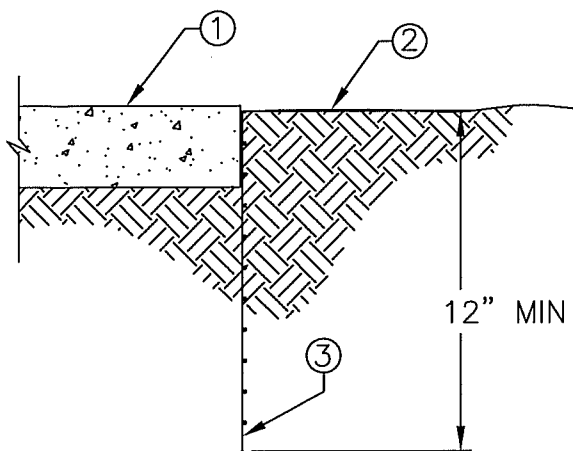
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PUD

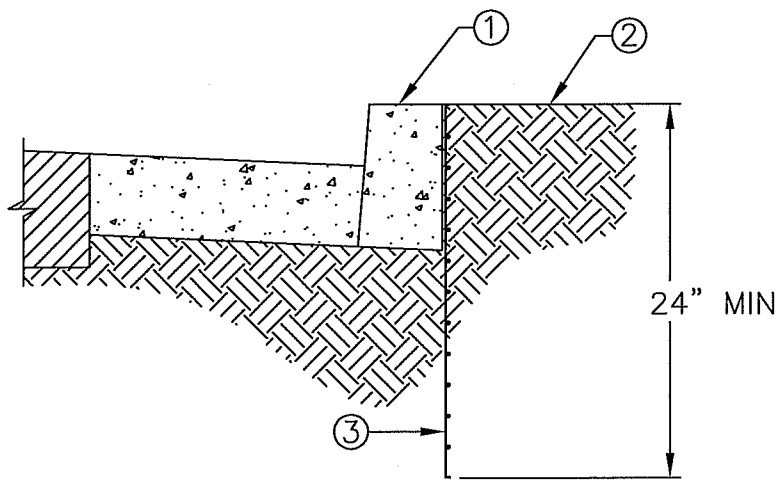
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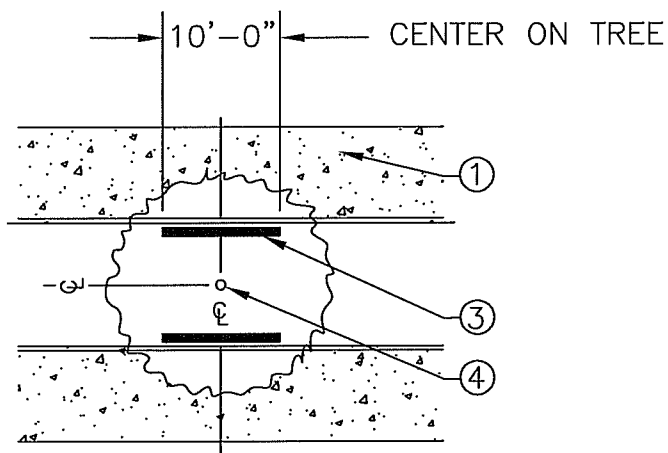
SIDEWALK  
APPLICATION



CURB OR CURB  
AND GUTTER  
APPLICATION

NOTES:

- ① PROPOSED OR EXISTING CONCRETE CURB OR WALK, (TYP.)
- ② FINISHED GRADE OF PLANTING AREA
- ③ INSTALL 12" OR 24" (AS SHOWN) DEEP ROOT CONTROL BARRIER, CENTER BARRIER ON TREE
- ④ PROPOSED TREE.



# CITY OF CLOVIS

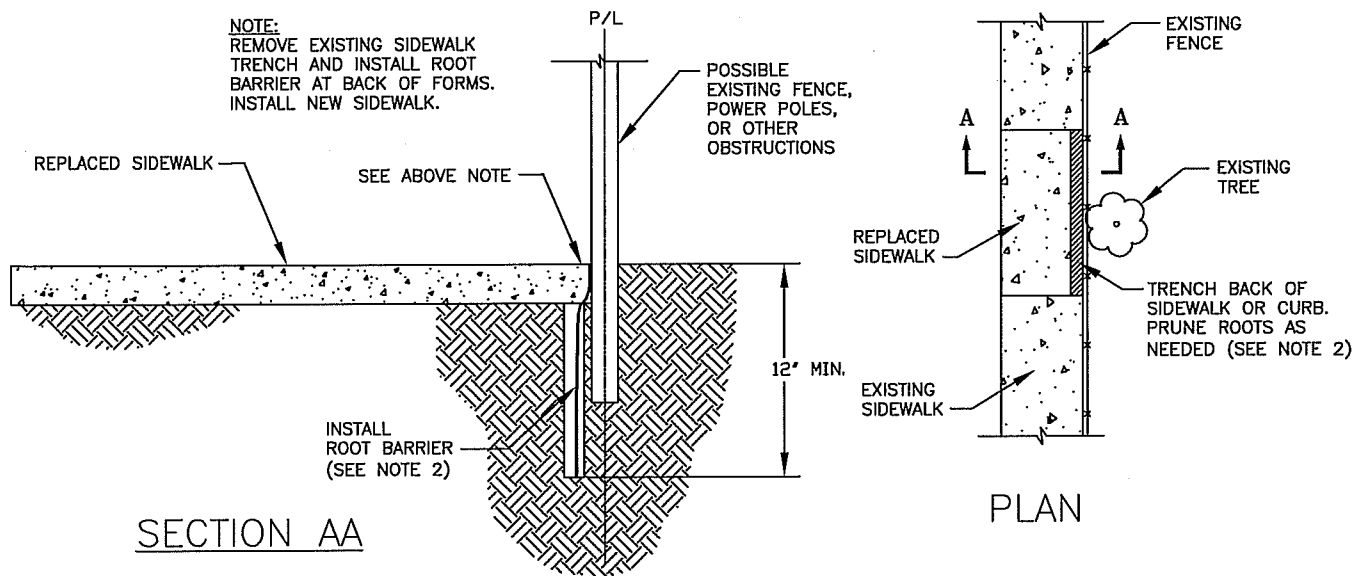
## ROOT BARRIER, NEW TREE PLANTING

DWG NO.  
**P-17**

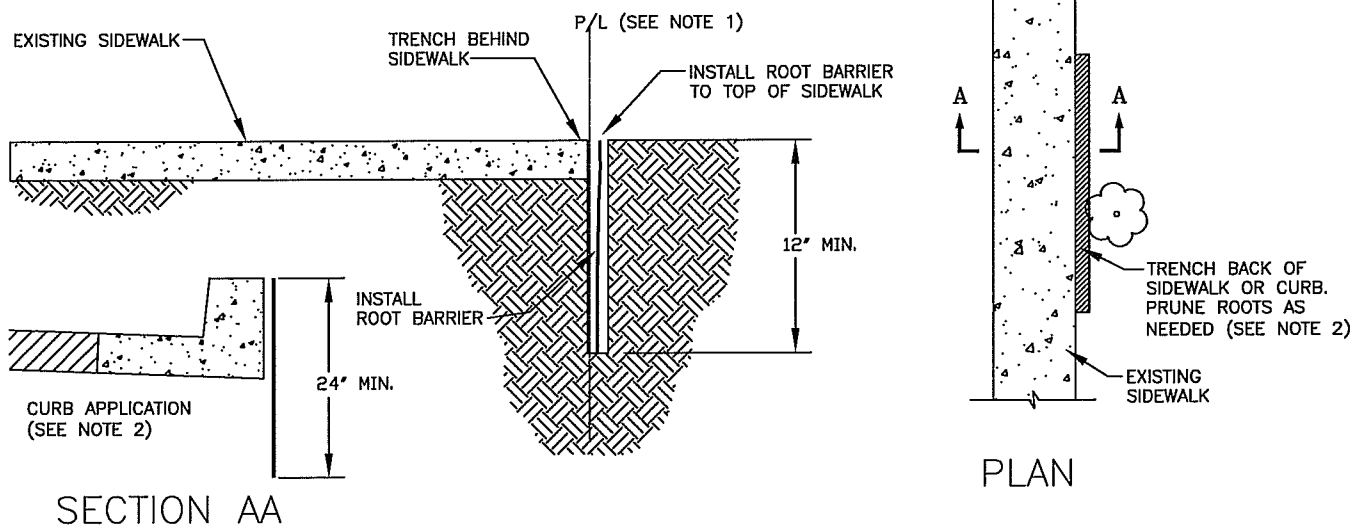
REF. STANDARD SPEC  
SECTION 20  
LANDSCAPE PLANTING

APPROVED BY:	NO.	REVISED	BY	APPROVALS	SCALE: NTS
CITY ENGINEER		01-19-11	BGJ	CM	DRAWN BY: JA
DATE: 4/29/11				DRU	SHEET 1 OF 1
				PUD	

## AREAS WHERE SIDEWALK OR CURB IS BEING REPLACED



## AREAS WHERE SIDEWALK IS TO REMAIN



### NOTE:

CURB TO BE APPROVED ROOT CONTROL BARRIER INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

### NOTES:

1. IF ADJACENT PROPERTY IS PRIVATE, A CONSTRUCTION EASEMENT OR RIGHT OF ENTRY IS REQUIRED.
2. LENGTH AND PLACEMENT LOCATION OF BARRIER IS DEPENDENT ON EXTENT OF ROOT INTRUSION. TO BE DETERMINED BY THE ENGINEER.



# CITY OF CLOVIS

## ROOT BARRIER, SIDEWALK REPLACEMENT/PROTECTION, EXISTING TREE

DWG NO.

**P-18**

REF. STANDARD SPEC  
SECTION 20  
LANDSCAPE PLANTING

SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1

APPROVED BY:

CITY ENGINEER

DATE:

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01-27-11

BGJ

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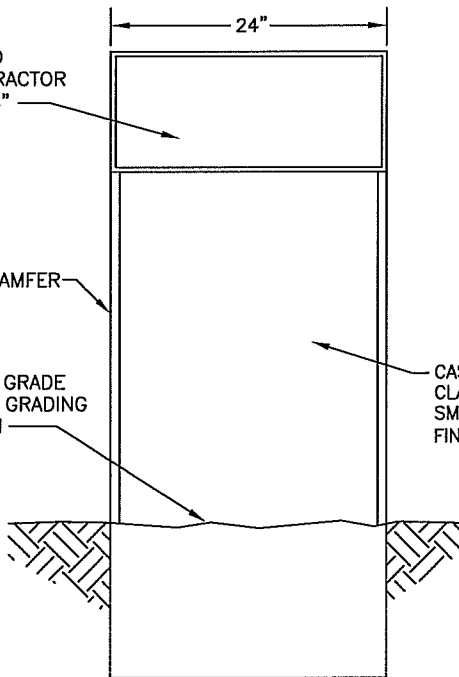
OTHER

*[Signature]*  
4/29/11

DEDICATION  
PLAQUE  
PROVIDED  
BY CITY,  
INSTALLED  
BY CONTRACTOR  
18" X 24"

3/4" CHAMFER

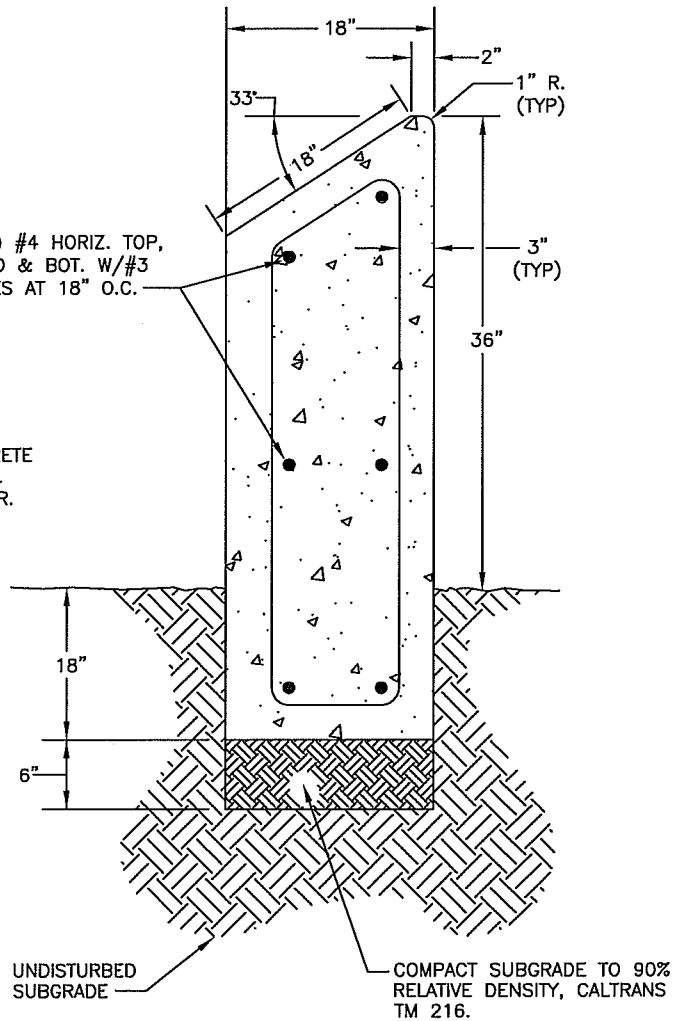
FIN. GRADE  
PER GRADING  
PLAN



ELEVATION

CAST-IN-PLACE  
CLASS 2 CONCRETE  
SMOOTH TROWEL  
FINISH W/SEALER.

(2) #4 HORIZ. TOP,  
MID & BOT. W/#3  
TIES AT 18" O.C.



SECTION



# CITY OF CLOVIS

## DEDICATION PLAQUE & PEDESTAL

DWG NO.

**P-19**

REF.: STD. SPECIFICATIONS  
SECTION 83 LIGHTING  
SYSTEMS

APPROVED BY:

CITY ENGINEER

DATE:

NO.

REVISED

BY

APPROVALS

01-25-11

BGJ

CM

DRU

PUD

OTHER

OTHER

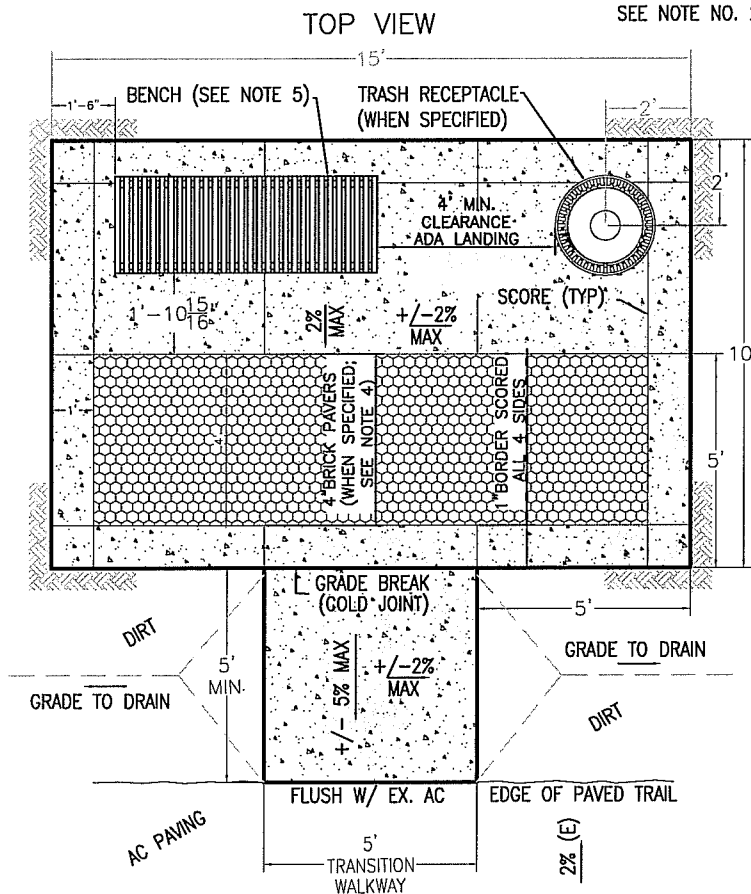
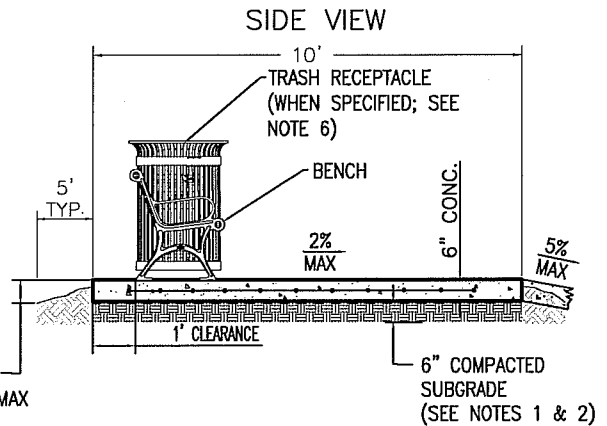
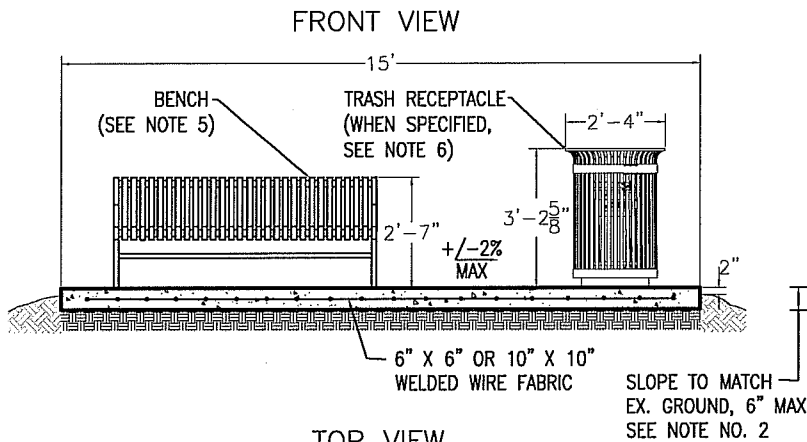
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SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1





#### NOTES:

1. CONST. EMBANKMENT W/MAX 10% SLOPE AWAY FROM SLAB.
2. COMPACT SUBGRADE TO 90% REL. COMPACTION PER CALTRANS T.M. 216.
3. CONCRETE SHALL BE CLASS 2, MEDIUM SWEAT FINISH. APPLY 1/8" WIDE X 1/2" DEEP SCORE LINES AS SHOWN.
4. WHEN SPECIFIED TO BE INSTALLED IN LIEU OF COMPLETE CONC. SLABS, BRICK PAVERS SHALL BE UNI-DECOR OR APPROVED EQUAL W/ BASKET WEAVE PATTERN.
5. BENCH SHALL BE 6-FT., VICTOR STANLEY, INC., CLASSIC SERIES CR-96, OR APPROVED EQUAL, MOUNTED TO SLAB PERMANENTLY USING METHODS APPROVED BY THE MANUFACTURER OR THE ENGINEER.
6. WHEN SPECIFIED TO BE INSTALLED, 36-GAL. TRASH RECEPTACLE SHALL BE VICTOR STANLEY, INC. IRONSITES SERIES S-42 OR APPROVED EQUAL. RECEPTACLE TO BE PERMANENTLY AFFIXED TO CONC. SLAB IN AN APPROVED MANNER.



# CITY OF CLOVIS

## TRAIL REST STOP

DWG NO.

**P-20**

REF.: STANDARD SPEC. SECTIONS 19, 73, & 90

SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1

APPROVED BY:

CITY ENGINEER

DATE:

NO.

REVISED

BY

APPROVALS

01-21-11

BGJ

CM

DRU

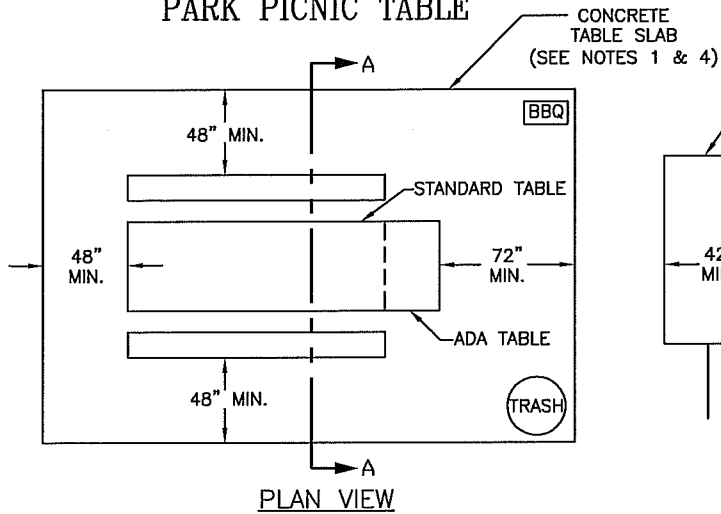
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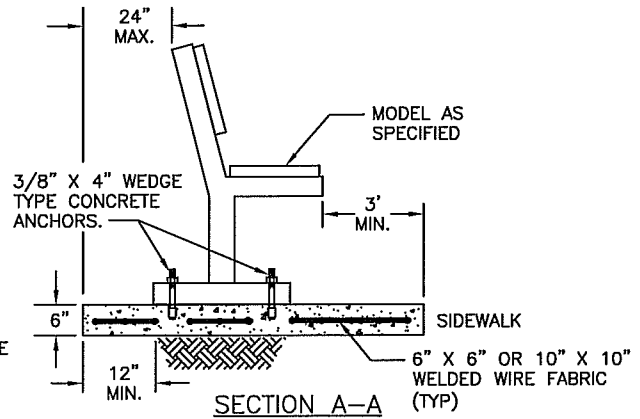
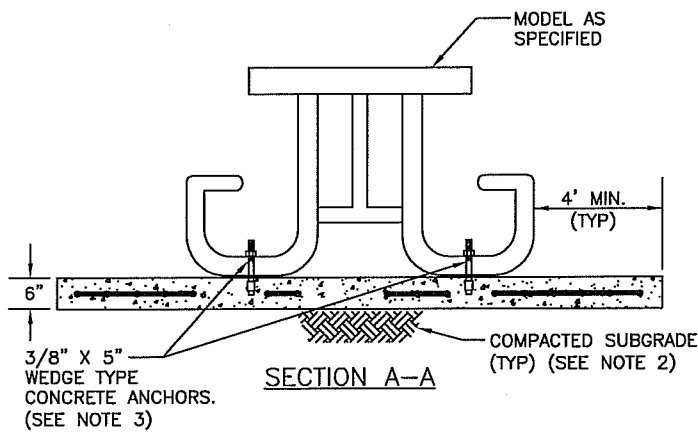
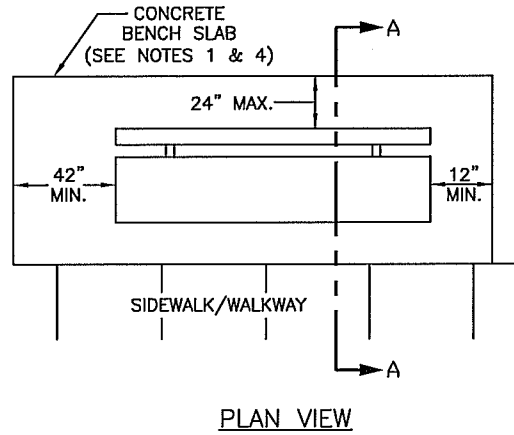
OTHER

OTHER

## PARK PICNIC TABLE



## PARK BENCH



### NOTES:

1. CONCRETE SLABS TO BE CLASS 2, MEDIUM SWEAT FINISH.
2. COMPACT SUBGRADE TO 90% REL. COMPACTION PER CALTRANS T.M. 216.
3. ANCHORS MAY VARY ACCORDING TO BENCH AND TABLE MODELS.
4. OVERALL EXTERIOR DIMENSIONS OF SLABS WILL VARY AT EACH INSTALLATION.



# CITY OF CLOVIS

## PICNIC TABLE AND BENCH SLABS

DWG NO.

P-21

REF. STANDARD SPEC  
SECTION 20  
LANDSCAPE PLANTING

SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1

APPROVED BY:

CITY ENGINEER

DATE:

NO.

REVISED

BY

APPROVALS

01-19-11

BGJ

CM

DRU

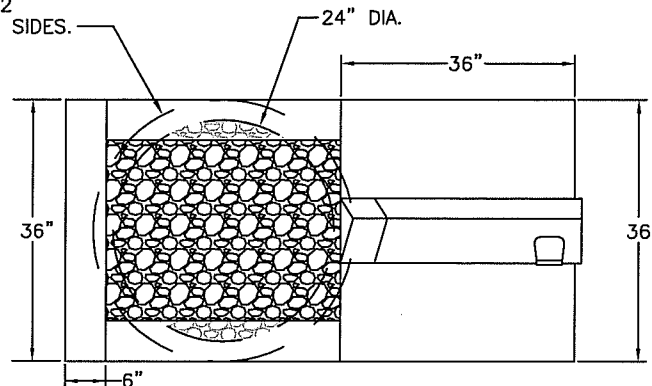
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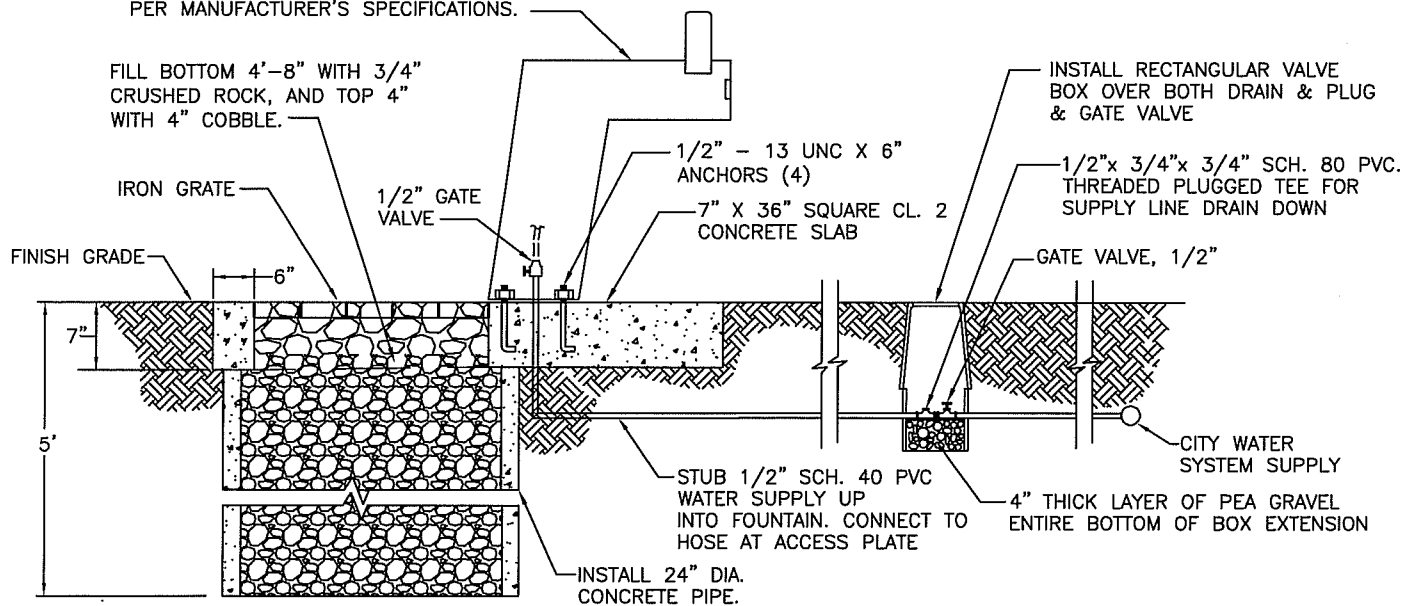
OTHER

6" X 7" DEEP CL. 2  
CONCRETE CURB, 3 SIDES.



PLAN VIEW

INSTALL HAWS MODEL 3202  
OR APPROVED EQUAL DRINKING FOUNTAIN  
PER MANUFACTURER'S SPECIFICATIONS.



ELEVATION



# CITY OF CLOVIS

## DRINKING FOUNTAIN

DWG NO.

**P-22**

REF: STD. SPECS  
N/A

APPROVED BY:

CITY ENGINEER

DATE:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

01-24-11

BGJ

CM

OTHER

DRAWN BY: JA

06-15-11

BGJ

DRU

OTHER

SHEET 1 OF 1

PUD

OTHER

A diagram of a car seat with a headrest and a horizontal bar. The seat is shown in profile, facing right. A horizontal bar is positioned across the seat, and a headrest is attached to the back of the seat.

LIGHT TO BE:  
25-45 WATT FLORESCENT  
OR LED.

1. THE PHOTO CELL IS TO BE INSTALLED WITHIN THE ELECTRICAL SERVICE PANEL BOX UNDER A LEXAN WINDOW.
2. TIMERS TO BE INSTALLED INSIDE ELECTRICAL SERVICE PANEL.
3. FOR EACH LIGHTING SYSTEM INSTALL A PHOTO CELL OVERRIDE SWITCH FOR TESTING OF LIGHTS.

CONCRETE EXTENDED  
4" ABOVE PAD.  
BROOM FINISH. —

12"

— SIDEWALK/LAWN

— PLACE CLASS 2 CONCRETE  
BORDER ALL AROUND PULL BOX  
WHERE NO SIDEWALK.

- PULL BOX & FUSE  
(SECURED)

- GROUND ROD

- ANCHOR BOLTS PER  
MANUFACTURERS  
RECOMMENDATIONS.

\* DIMENSIONS ARE GENERAL AND MAY CHANGE PER MANUFACTURER'S RECOMMENDATIONS, PLANS OR SPECS.

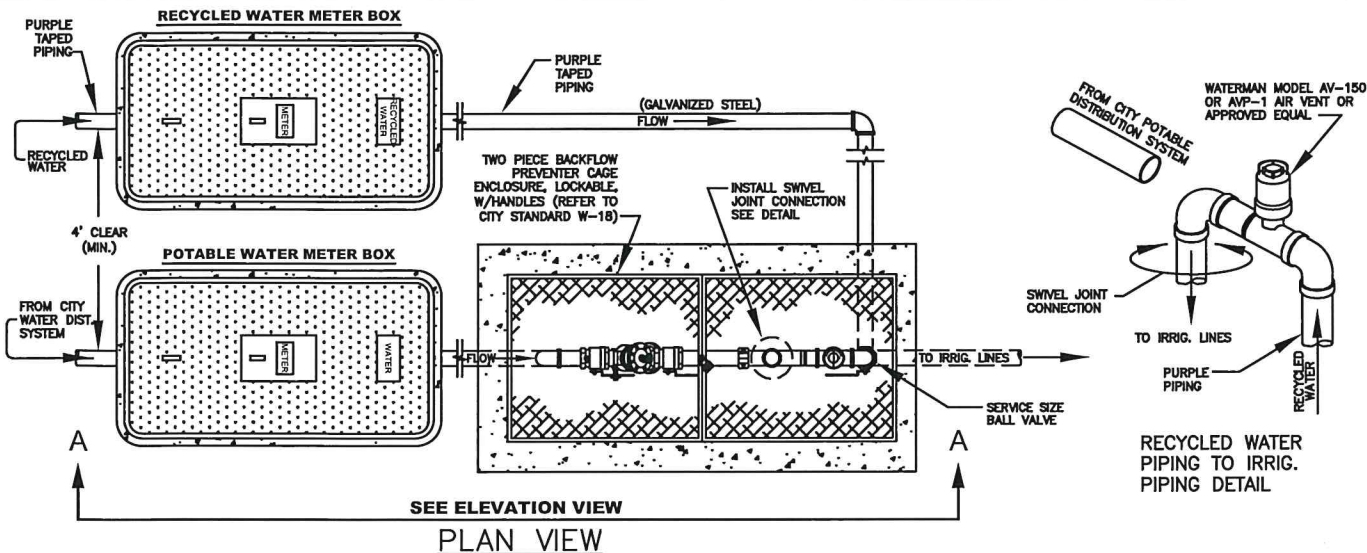


# PARK SECURITY LIGHT

P-23

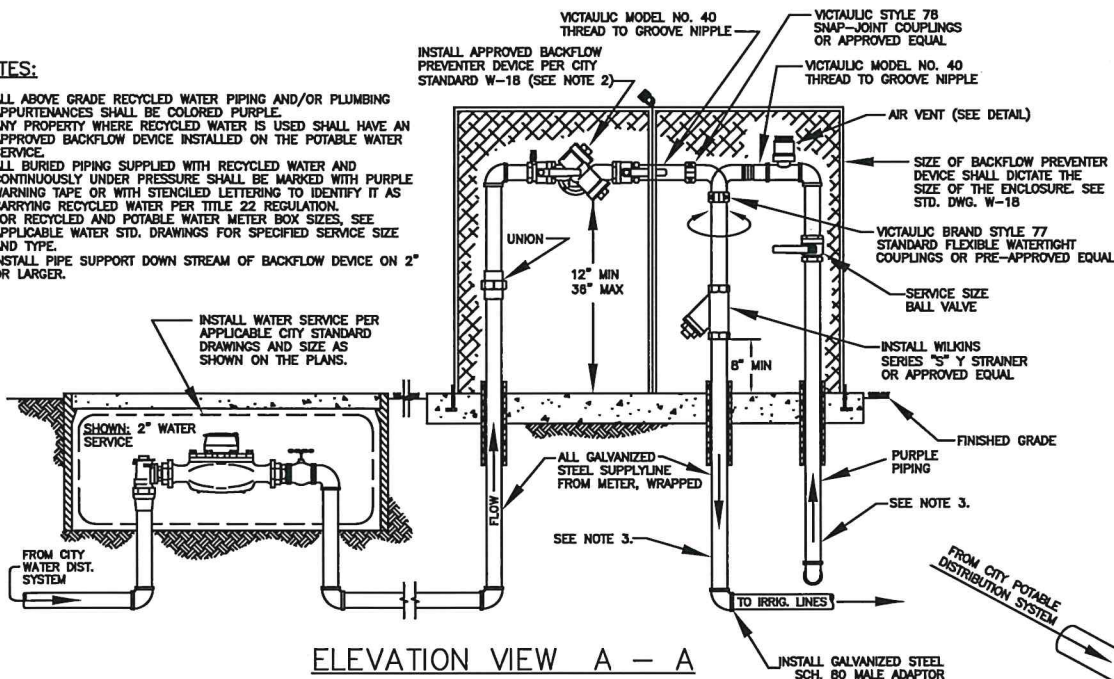
SHEET 1 OF 1

9/2/21



#### NOTES:

1. ALL ABOVE GRADE RECYCLED WATER PIPING AND/OR PLUMBING APPURTENANCES SHALL BE COLORED PURPLE.
2. ANY PROPERTY WHERE RECYCLED WATER IS USED SHALL HAVE AN APPROVED BACKFLOW DEVICE INSTALLED ON THE POTABLE WATER SERVICE.
3. ALL BURIED PIPING SUPPLIED WITH RECYCLED WATER AND CONTINUOUSLY UNDER PRESSURE SHALL BE MARKED WITH PURPLE WARNING TAPE OR WITH STENCILED LETTERING TO IDENTIFY IT AS CARRYING RECYCLED WATER PER TITLE 22 REGULATION.
4. FOR RECYCLED AND POTABLE WATER METER BOX SIZES, SEE APPLICABLE WATER STD. DRAWINGS FOR SPECIFIED SERVICE SIZE AND TYPE.
5. INSTALL PIPE SUPPORT DOWN STREAM OF BACKFLOW DEVICE ON 2" OR LARGER.



①	VICTAULIC STYLE 78 SNAP-JOINT COUPLINGS OR APPROVED EQUAL. COUPLINGS ARE TO BE DESIGNED FOR QUICK DISCONNECT SERVICE.	
②	VICTAULIC NO. 10 90° ELBOWS OR APPROVED EQUAL FITTINGS ARE TO BE SUPPLIED WITH GROOVES OR SHOULDERS TO PERMIT FAST INSTALLATION WITHOUT FIELD PREPARATION. THE GROOVED DESIGN PERMITS FLEXIBILITY FOR EASY ALIGNMENT.	



# CITY OF CLOVIS

## RECYCLED WATER PIPING WITH SWIVEL JOINT CONNECTION

DWG NO.

**RW-1**

REF: STD. SPECIFICATIONS  
SECTION 67

SCALE: NTS

DRAWN BY: BGJ

SHEET 1 OF 1

APPROVED BY:

*[Signature]*

CITY ENGINEER

DATE: 1/16/2020

NO.

REVISED

BY

APPROVALS

03-13-09

BGJ

CM

DRU

PUD

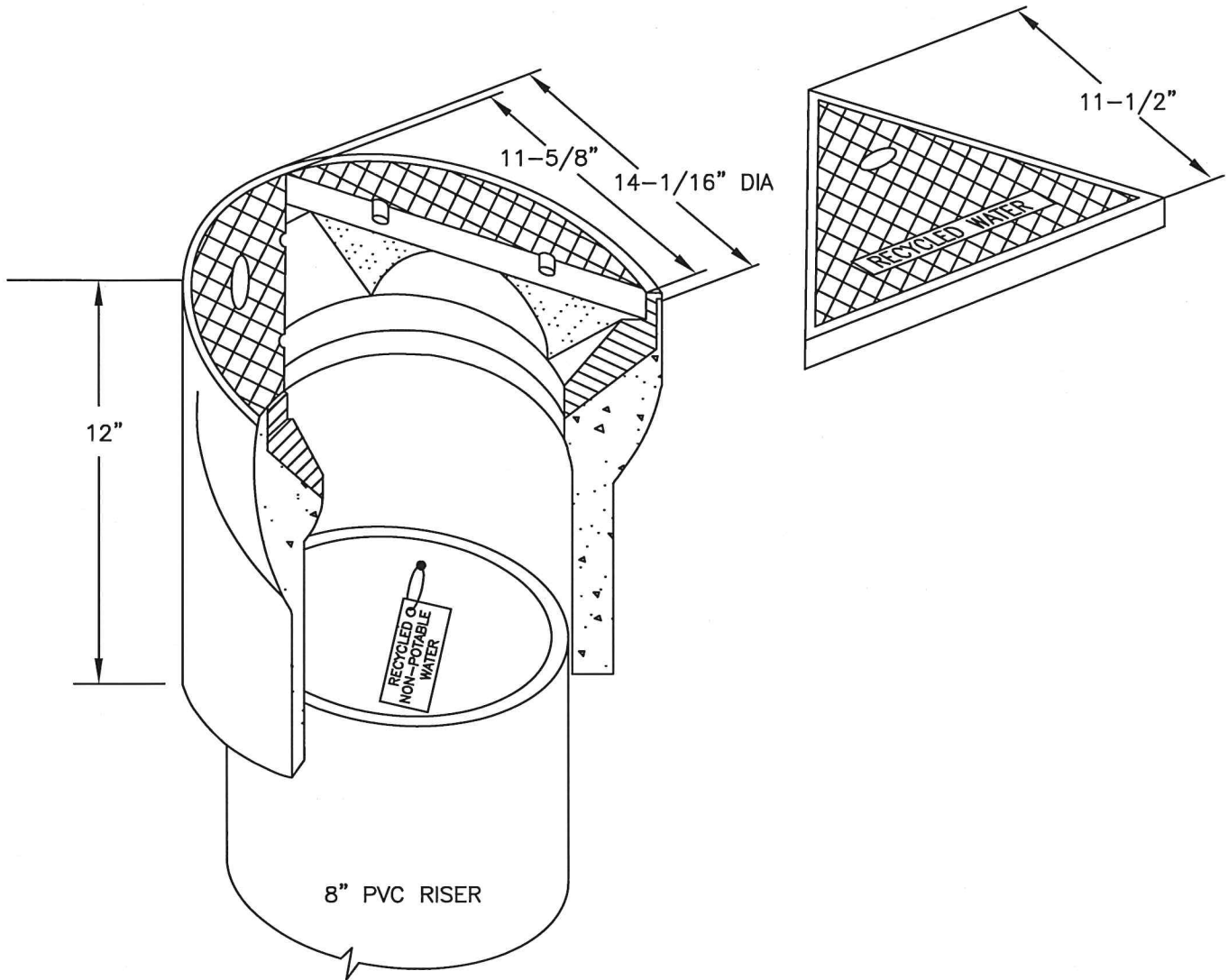
05-16-12

BGJ

07-25-19

CGV

2



**NOTES:**

1. VALVE BOX SHALL BE CHRISTY MODEL G04BOX TRAFFIC VALVE BOX (10" I.D. X 12" HIGH) OR APPROVED EQUAL.
2. VALVE BOX LID SHALL BE CHRISTY MODEL G04C, CAST IRON, OR APPROVED EQUAL. THE WORDS "RECYCLED WATER" SHALL BE STAMPED OR CAST, OR HARDFACE WELDED ONTO LID.
3. ALL OTHER ASPECTS OF THE BOX, INCLUDING CONCRETE COLLAR, RISER, AND TRACER WIRE SHALL CONFORM TO STANDARD DRAWING W-1, "WATER VALVE."
4. HANG 2"X4" METAL TAG LABELED "RECYCLED, NON-POTABLE WATER" NEAR THE TOP OF THE PVC RISER.



# CITY OF CLOVIS

## RECYCLED WATER VALVE BOX

DWG NO.

**RW-2**

REF: STD. SPECIFICATIONS  
SECTION 67

APPROVED BY:

*[Signature]*

CITY ENGINEER

DATE: 1/16/2020

NO.

REVISED

BY

APPROVALS

06-10-09

BGJ

CM

DRU

PUD

08-18-09

BGJ

07-25-19

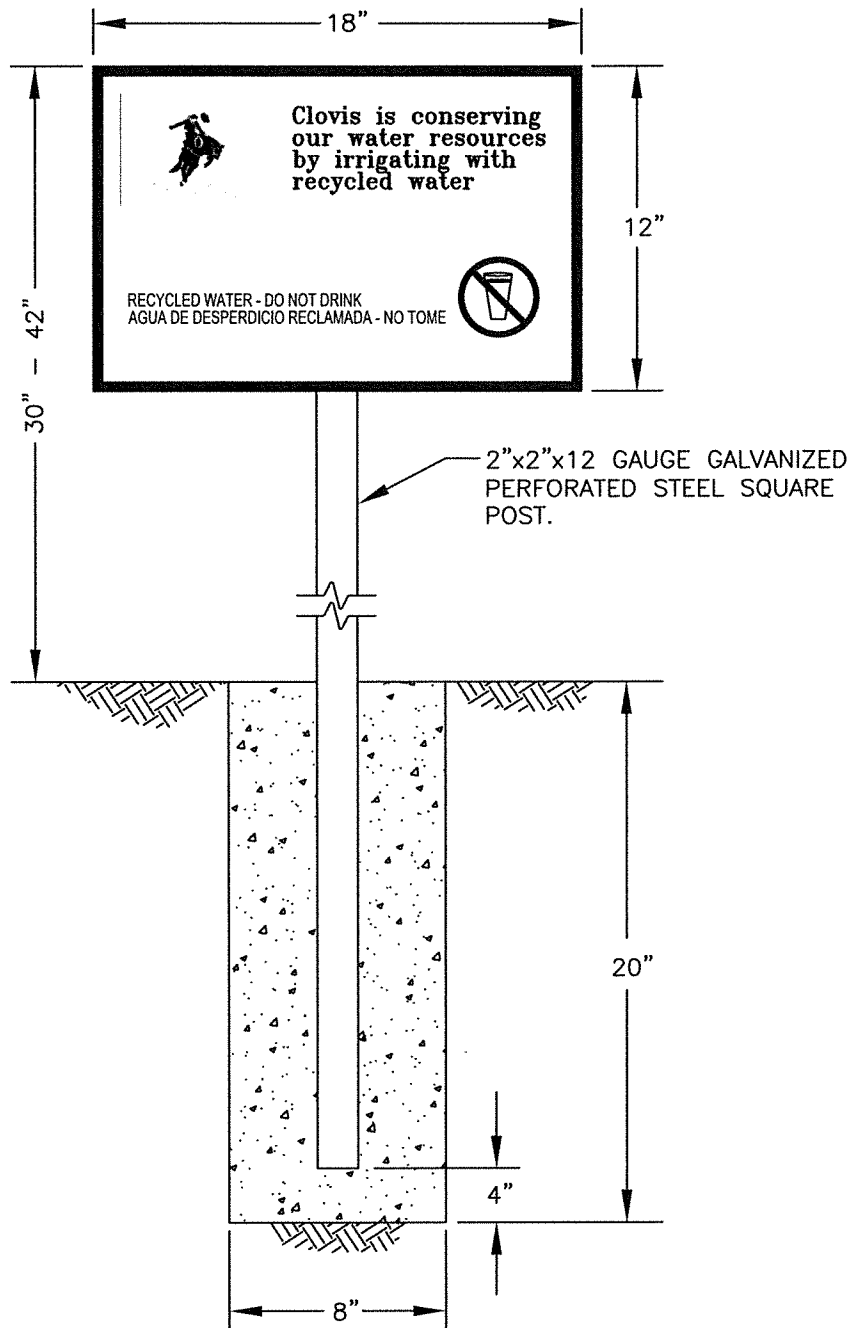
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SCALE: NTS

DRAWN BY: BGJ

SHEET 1 OF 1

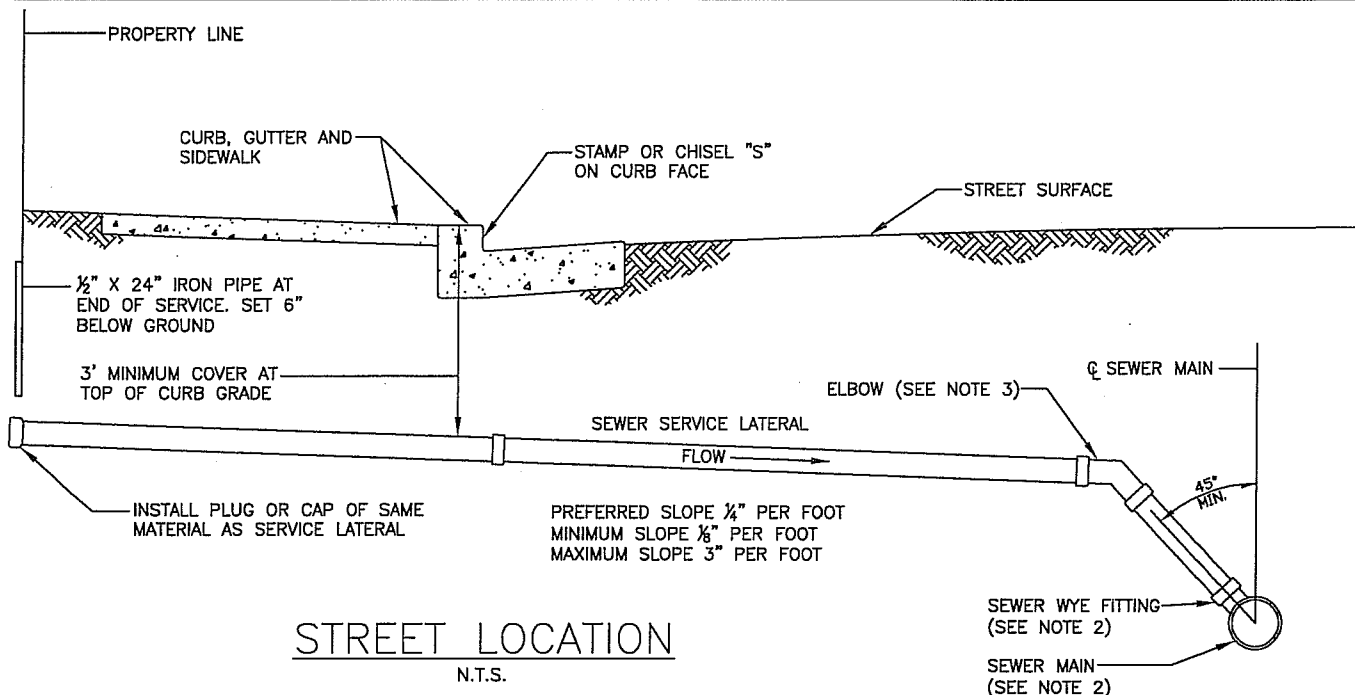




#### NOTES:

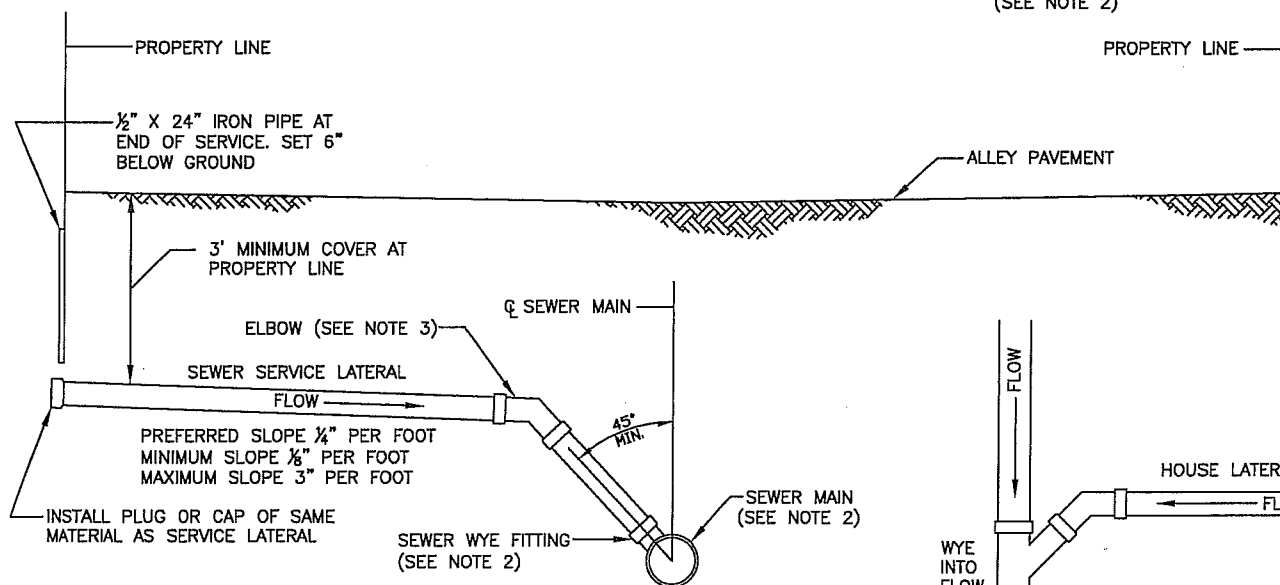
1. ALL USE AREAS WHERE RECYCLED WATER IS USED THAT ARE ACCESSIBLE TO THE PUBLIC SHALL BE POSTED WITH ONE OR MORE INFORMATION SIGNS IN CONSPICUOUS LOCATIONS THAT ARE VISIBLE TO THE PUBLIC.
2. INFORMATION SIGNS SHALL BE CONSTRUCTED OF 0.080" THICK ALUMINUM REFLECTIVE SHEETING WITH A PURPLE BACKGROUND AND WHITE LETTERING AND A 3M#1160 GRAFFITI FILM APPLIED, OR APPROVED EQUAL.
3. LOCATION OF SIGN AT EACH RECYCLED WATER SERVICE TO BE DETERMINED BY THE ENGINEER.

	<b>CITY OF CLOVIS</b>					DWG NO. <b>RW-3</b>
	<b>RECYCLED WATER ID SIGN 18"X12"</b>					REF: STD. SPECIFICATIONS
APPROVED BY:	NO.	REVISED	BY	APPROVALS	SCALE: NTS	
CITY ENGINEER DATE: 10/22/15		06-16-09	BGJ	CM DRU PUD	DRAWN BY: BGJ	
		05-29-12	PAA		SHEET 1 OF 1	
		10-27-15	CGV			



## STREET LOCATION

N.T.S.

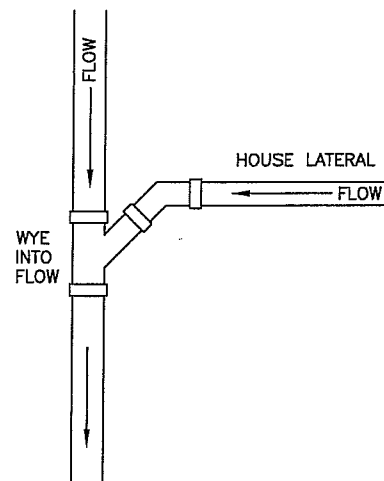


## ALLEY LOCATION

N.T.S.

### NOTES:

1. APPROVED PIPE MATERIALS  
P.V.C. - A.S.T.M. D3034-T3PSIG SDR-35
2. FOR EXISTING MAINS, INSTALL WITH DOUBLE STRAP 45° SADDLE AND MATCH EXISTING SEWER MAIN MATERIAL, OR CONSTRUCT AS DIRECTED BY THE ENGINEER. CORE HOLE IN THE MAIN SHALL MATCH SIZE AND SHAPE OF SADDLE WYE. SEE STD. DWG. S-1A.
3. SELECT PRE-MANUFACTURED ELBOW ANGLE TO MATCH FIELD CONDITIONS.



## PLAN VIEW

N.T.S.



# CITY OF CLOVIS

## 4" & 6" SEWER SERVICE LATERALS

DWG NO.

**S-1**

REF. STD. SPECIFICATIONS  
SECTION 64

APPROVED BY:

CITY ENGINEER

DATE:

6/29/09

NO.

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03-13-09

BGJ

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PUD

SCALE: NTS

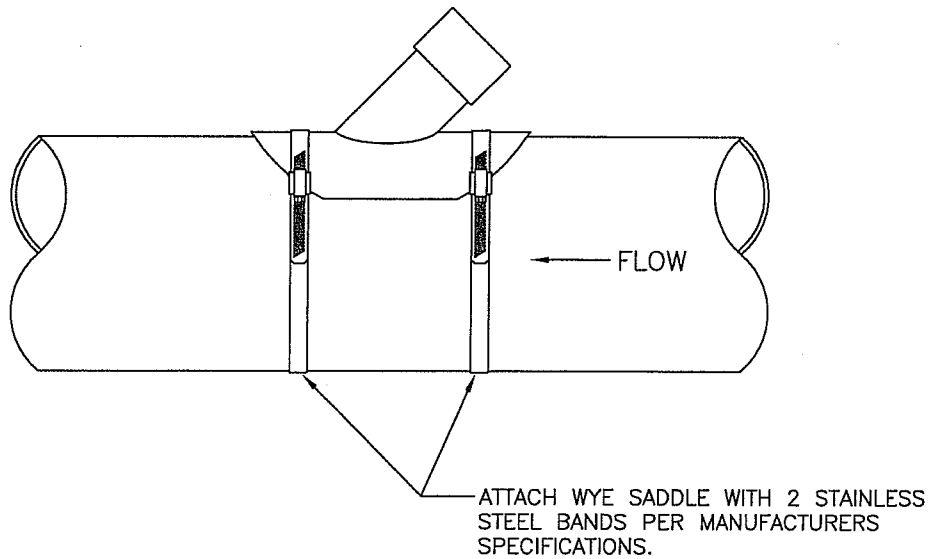
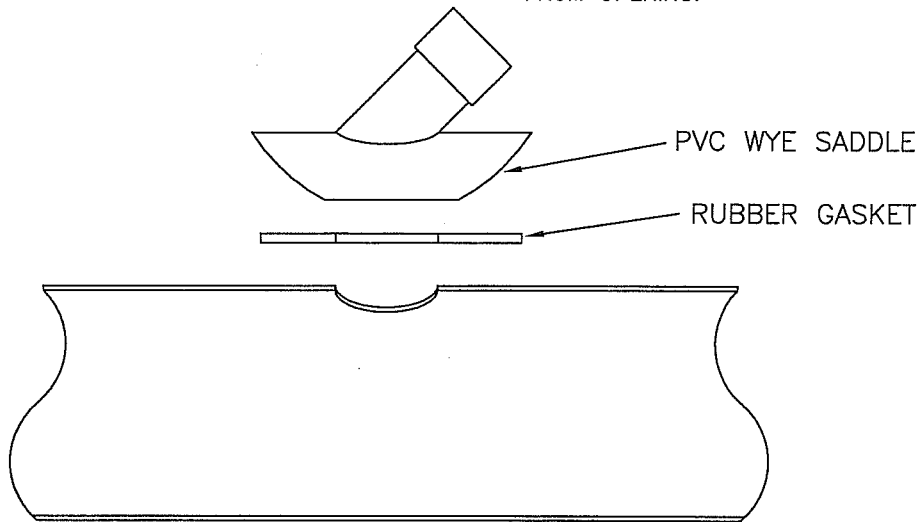
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SHEET 1 OF 1



**NOTE:**

USE WYE GASKET TO TRACE SIZE AND SHAPE OF OPENING ONTO PIPE. REMOVE ALL BURRS FROM OPENING.



# CITY OF CLOVIS

## TAPPING SADDLE ASSEMBLY

DWG NO.

**S-1A**

REF. STD. SPECIFICATIONS  
SECTION 64

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

6/29/09

03-13-09

BGJ

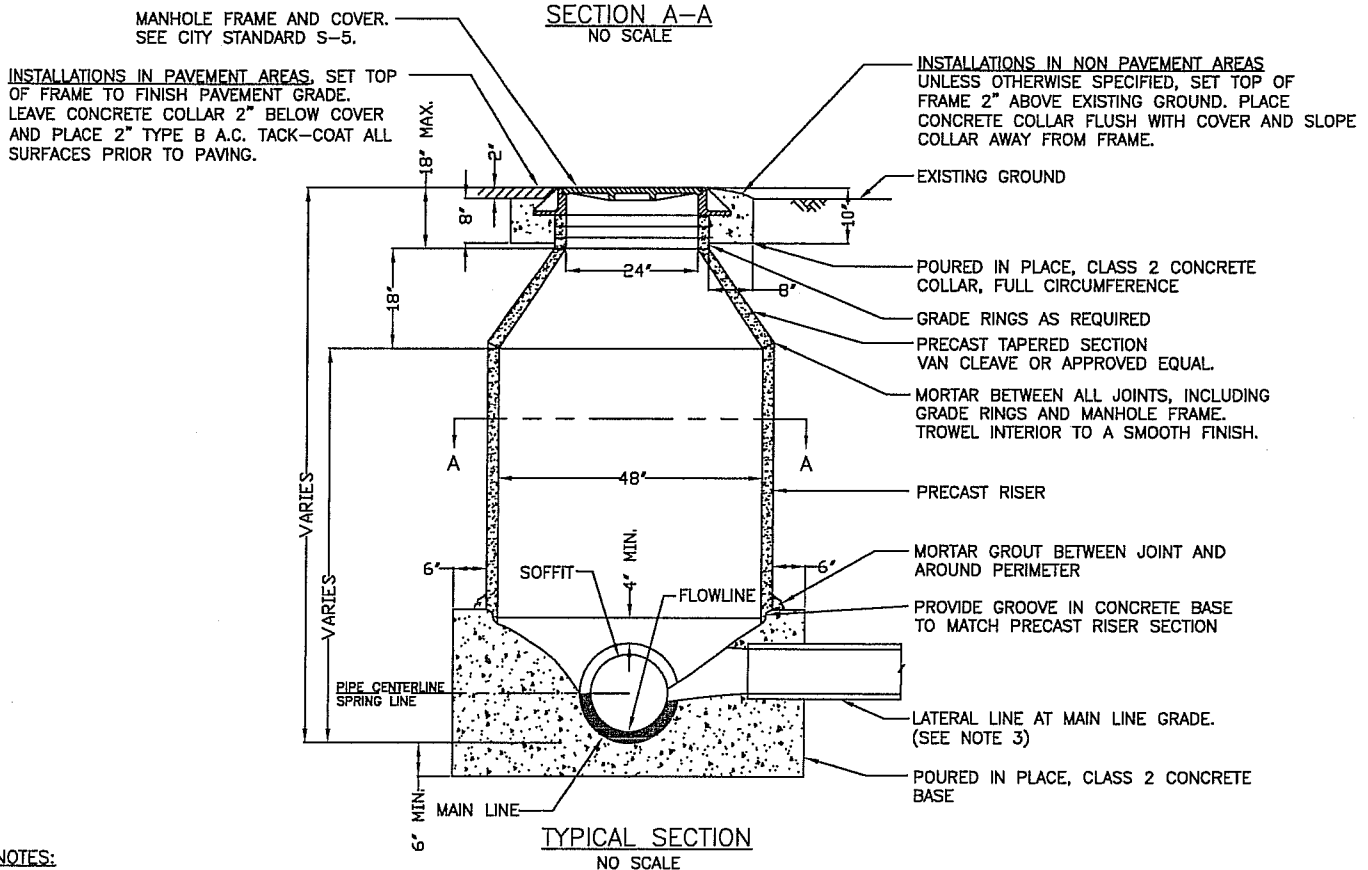
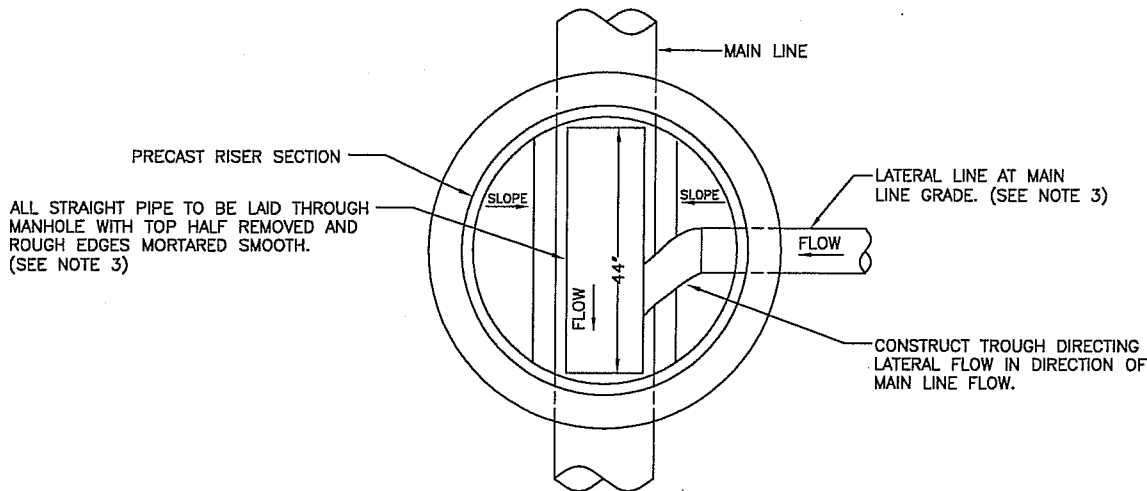
CM

DRU

PUD

DRAWN BY: BGJ

SHEET 1 OF 1



**NOTES:**

1. PRECAST PIPE, GRADE RINGS AND TAPERED SECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH A.S.T.M. C-478, TYPE II CEMENT.
2. WHEN AN ECCENTRIC TAPERED SECTION IS SPECIFIED, IT SHALL BE SET SUCH THAT THE OPENING IS CENTERED TOWARDS THE DOWNSTREAM SIDE OF THE MAIN LINE PIPE WHENEVER POSSIBLE, UNLESS OTHERWISE SHOWN ON THE PROJECT PLANS.
3. FOR MANHOLES WHERE THE MAIN LINE ANGLES, A FLOW TROUGH ALONG A SMOOTH RADIUS THROUGH THE CONCRETE MANHOLE BASE SHALL BE CONSTRUCTED TO FORM A UNIFORM FLOW SECTION OF THE SAME SHAPE AND SIZE OF THE PIPE BELOW THE SPRING LINE.



# **CITY OF CLOVIS**

## **48" SEWER MANHOLE**

DWG NO.

**S-2**

REF. STD. SPECIFICATIONS  
SECTION 64

APPROVED BY:

NO.

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BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

6/29/09

NO.

03-13-09

BGJ

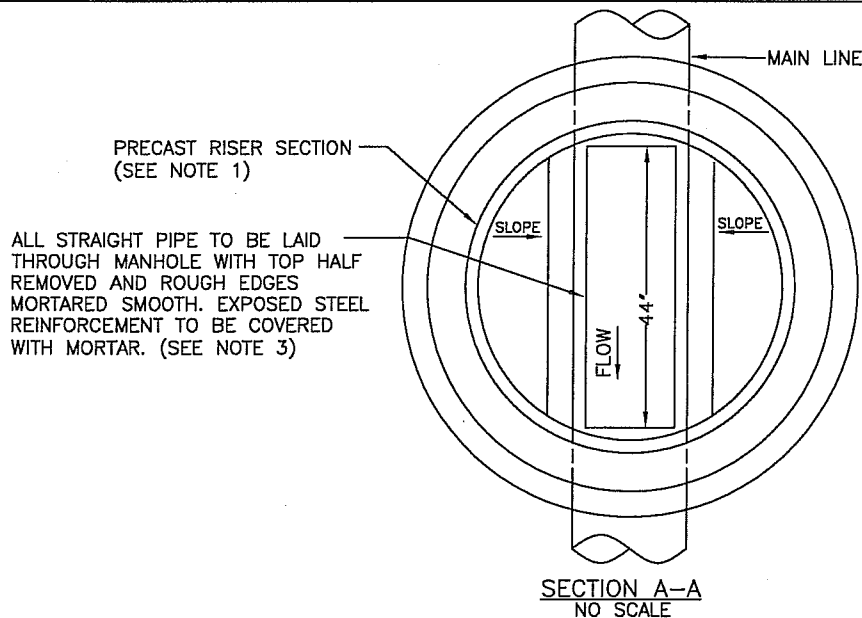
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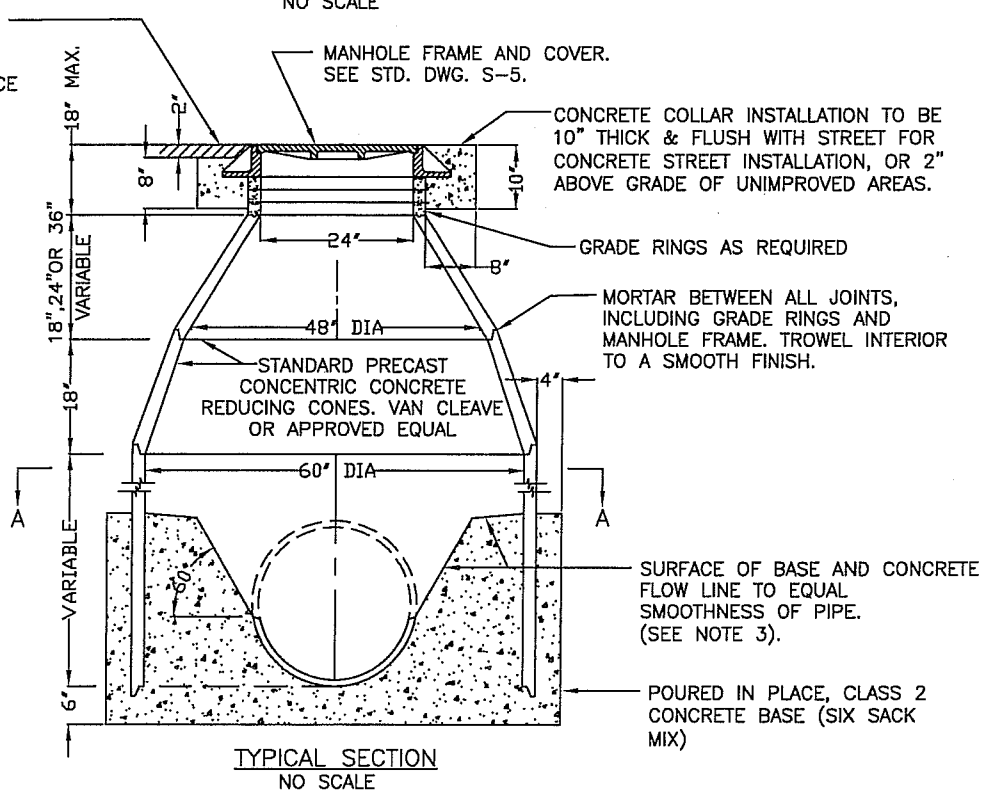
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SHEET 1 OF 1



ALL STRAIGHT PIPE TO BE LAID THROUGH MANHOLE WITH TOP HALF REMOVED AND ROUGH EDGES MORTARED SMOOTH. EXPOSED STEEL REINFORCEMENT TO BE COVERED WITH MORTAR. (SEE NOTE 3)

INSTALLATIONS IN PAVEMENT AREAS, SET TOP OF FRAME TO FINISH PAVEMENT GRADE. LEAVE CONCRETE COLLAR 2" BELOW COVER AND PLACE 2" TYPE B A.C. TACK-COAT TO ALL SURFACES PRIOR TO PAVING.



#### NOTES:

1. PRECAST PIPE, GRADE RINGS AND TAPERED SECTIONS SHALL COMPLY WITH A.S.T.M. C-478, TYPE II CEMENT.
2. WHEN AN ECCENTRIC TAPERED SECTION IS SPECIFIED, IT SHALL BE SET SUCH THAT THE OPENING IS CENTERED TOWARDS THE DOWNSTREAM SIDE OF THE MAIN LINE PIPE WHENEVER POSSIBLE, UNLESS OTHERWISE SHOWN ON THE PROJECT PLANS.
3. FOR MANHOLES WHERE THE MAIN LINE ANGLES, A FLOW TROUGH, ALONG A SMOOTH RADIUS THROUGH THE CONCRETE MANHOLE BASE, SHALL BE CONSTRUCTED TO FORM A UNIFORM FLOW SECTION OF THE SAME SHAPE AND SIZE OF THE PIPE BELOW THE SPRING LINE.



# CITY OF CLOVIS

DWG NO.

**S-3**

## 60" SEWER MANHOLE

REF. STD. SPECIFICATIONS  
SECTION 64

(TYPICALLY USE ONLY FOR INTERSECTING SEWERS 21" OR LARGER)

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

4/29/09

NO.

03-13-09

BGJ

CM

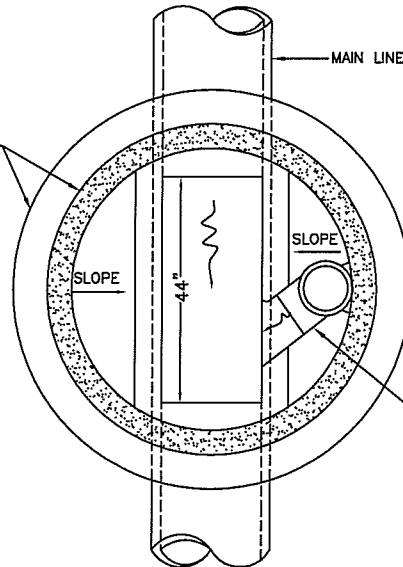
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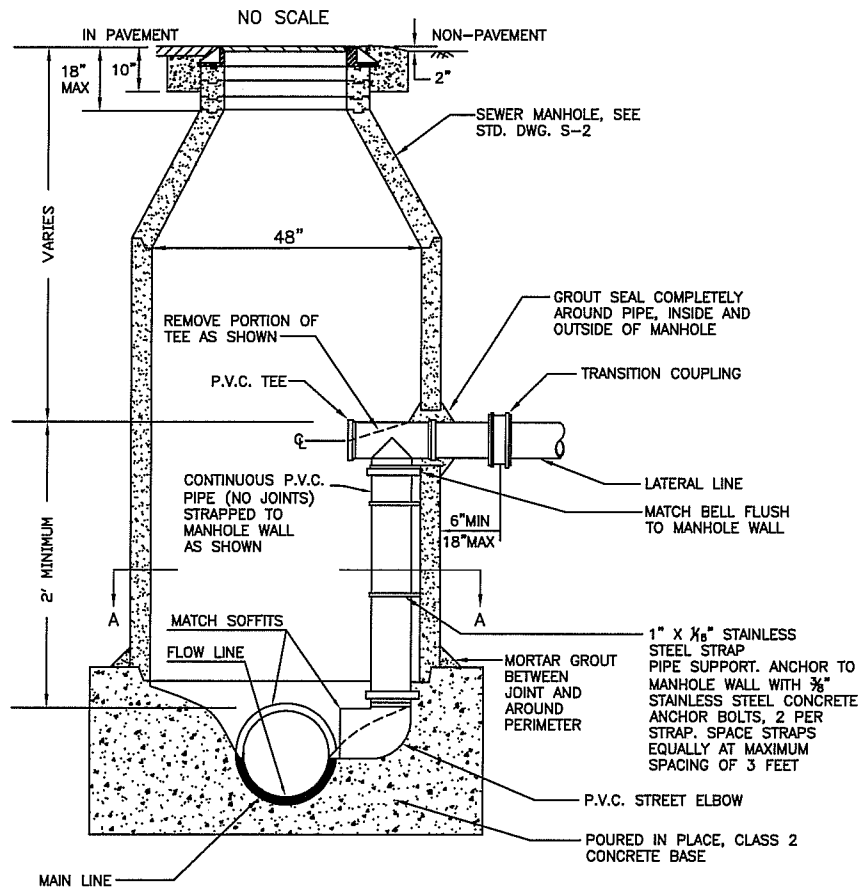
SHEET 1 OF 1

SEWER MANHOLE BASE AND RISER. SEE CITY STANDARD S-2 AND NOTE 1.



ROTATE 90° STREET ELBOW SO IT ENTERS MAIN LINE AT 45° ANGLE AS SHOWN.

### SECTION A-A



### NOTES

1. MANHOLE SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY STANDARD DRAWING S-2.
2. A DROP MANHOLE SHALL BE USED WHENEVER THE DIFFERENCE BETWEEN THE SOFFIT OF THE MAIN LINE AND THE SOFFIT OF THE LATERAL LINE IS TWO FEET OR GREATER.
3. ALL DROP PIPE MATERIALS SHALL BE A MINIMUM OF 8" PVC ASTM D3034-73 PSIG, SDR-35 OR LARGER TO MATCH LATERAL SIZE.
4. DROP MANHOLES ARE TO BE ALLOWED ONLY UPON SPECIAL AUTHORIZATION OF THE CITY ENGINEER.

### TYPICAL SECTION



# CITY OF CLOVIS

## INSIDE DROP MANHOLE

DWG NO.

**S-4**

REF. STD. SPECIFICATIONS  
SECTION 64

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

NO.

REVISED

BY

CM

DRU

PUD

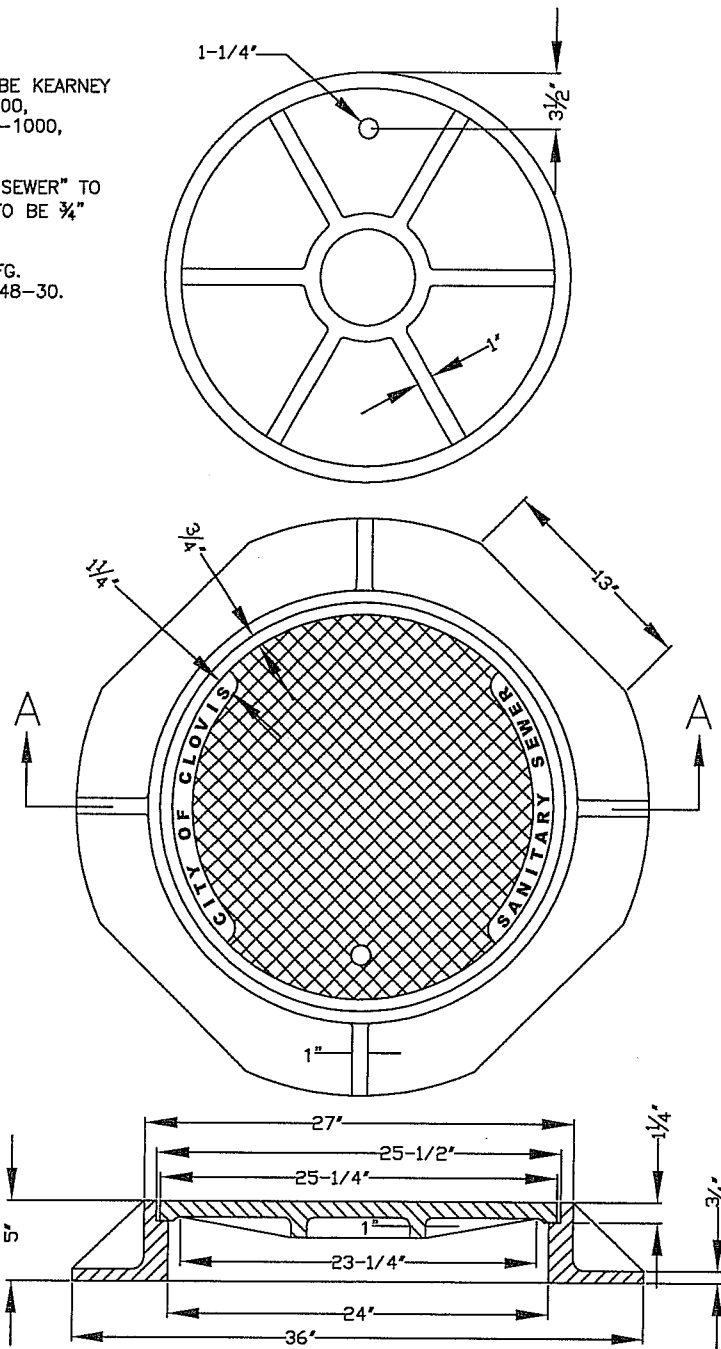
DRAWN BY: BGJ

DATE:

SHEET 1 OF 1

**NOTES:**

1. FRAME AND COVER SHALL BE KEARNEY  
FOUNDRY PART NO. KP-1000,  
D&L FOUNDRY PART NO. A-1000,  
OR APPROVED EQUAL.
2. "CITY OF CLOVIS SANITARY SEWER" TO  
APPEAR ON LID. LETTERS TO BE 3/4"  
HIGH.
3. ALL MATERIALS USED IN MFG.  
SHALL CONFORM TO ASTM 48-30.



SECTION A-A



# CITY OF CLOVIS

## SEWER MANHOLE FRAME AND COVER

DWG NO.

**S-5**

REF. STD. SPECIFICATIONS  
SECTION 64

APPROVED BY:

CITY ENGINEER

DATE: 6/29/09

NO.

REVISED

BY

APPROVALS

03-04-09

BGJ

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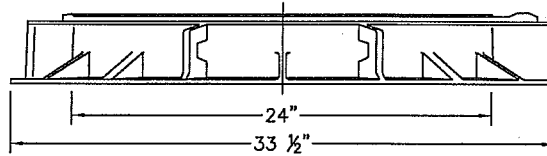
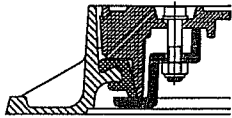
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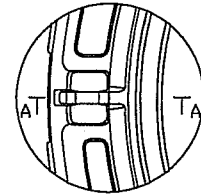
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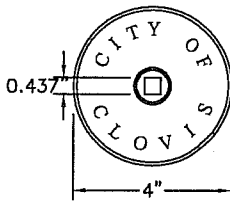
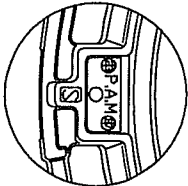
LOCKING MECHANISM



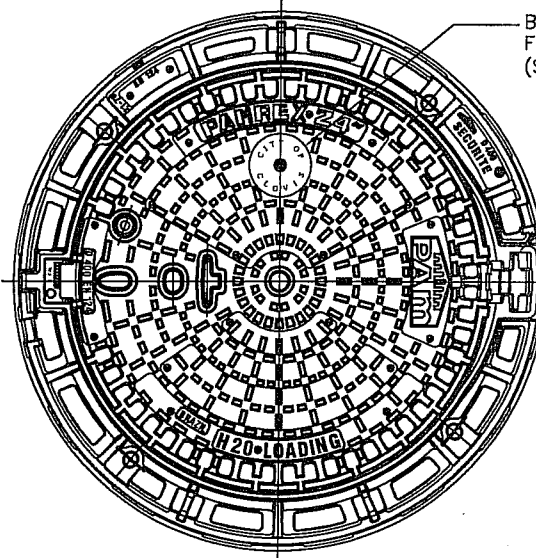
DETAIL A: LIFTING HOLES



FRAME MARKING



BADGE DETAIL TOP VIEW

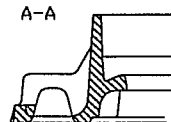


BADGE TO BE INSTALLED DURING FINAL COMPLETION (SEE BADGE DETAIL)

COVER HINGE

NOTCH COLLAR OR GRADE RING BELOW HINGE SWEEP

← DIRECTION OF TRAFFIC



NOTES:

1. MANHOLE COVER AND FRAME SHALL BE CALLED PAMREX RETRO OR APPROVED EQUAL.
2. COVER AND FRAME SHALL BE MANUFACTURED FROM DUCTILE IRON.
3. COVERS SHALL BE HINGED AND INCORPORATE A 90-DEGREE BLOCKING SYSTEM TO PREVENT ACCIDENTAL CLOSURE AND COMPLETE WITH HINGE INFILTRATION PLUG.
4. COVERS SHALL INCLUDE A 4" DIAMETER RECESS WITH 3/8" DIAMETER BOLT KNOCK-OUT THAT IS COMPATIBLE WITH 4" ALMETEK STAINLESS STEEL MARKERS.
5. COVERS SHALL BE COMPATIBLE WITH THE PL-101, AND THE PL101-EX STAINLESS STEEL MANHOLE LOCKING SYSTEM AS MANUFACTURED BY CERTAINTEED CORPORATION.
6. COVERS SHALL BE ONE MAN OPERABLE USING STANDARD HAND TOOLS, AND THE OT-104 & OTL-103 OPENING TOOLS AS MANUFACTURED BY TITUS CERTAINTEED CORPORATION.
7. COVERS SHALL BE CAPABLE OF WITHSTANDING A 120,000 LB. TEST LOAD.
8. FRAMES SHALL BE CIRCULAR AND SHALL INCORPORATE A SEATING RING, A DUAL WIPER INFILTRATION PLUG, AND BE AVAILABLE IN A 24 INCH CLEAR OPENING. THE FRAME DEPTH SHALL NOT EXCEED 4 INCHES, AND THE FLANGE SHALL INCORPORATE BEDDING SLOTS AND BOLT HOLES.
9. ALL COMPONENTS SHALL BE BLACK COATED.



# CITY OF CLOVIS

## LOCKING 24 INCH MANHOLE COVER AND FRAME

DWG NO.

**S-6**

REF. STD. SPECIFICATIONS  
SECTION 64

APPROVED BY:

CITY ENGINEER

DATE:

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03-13-09

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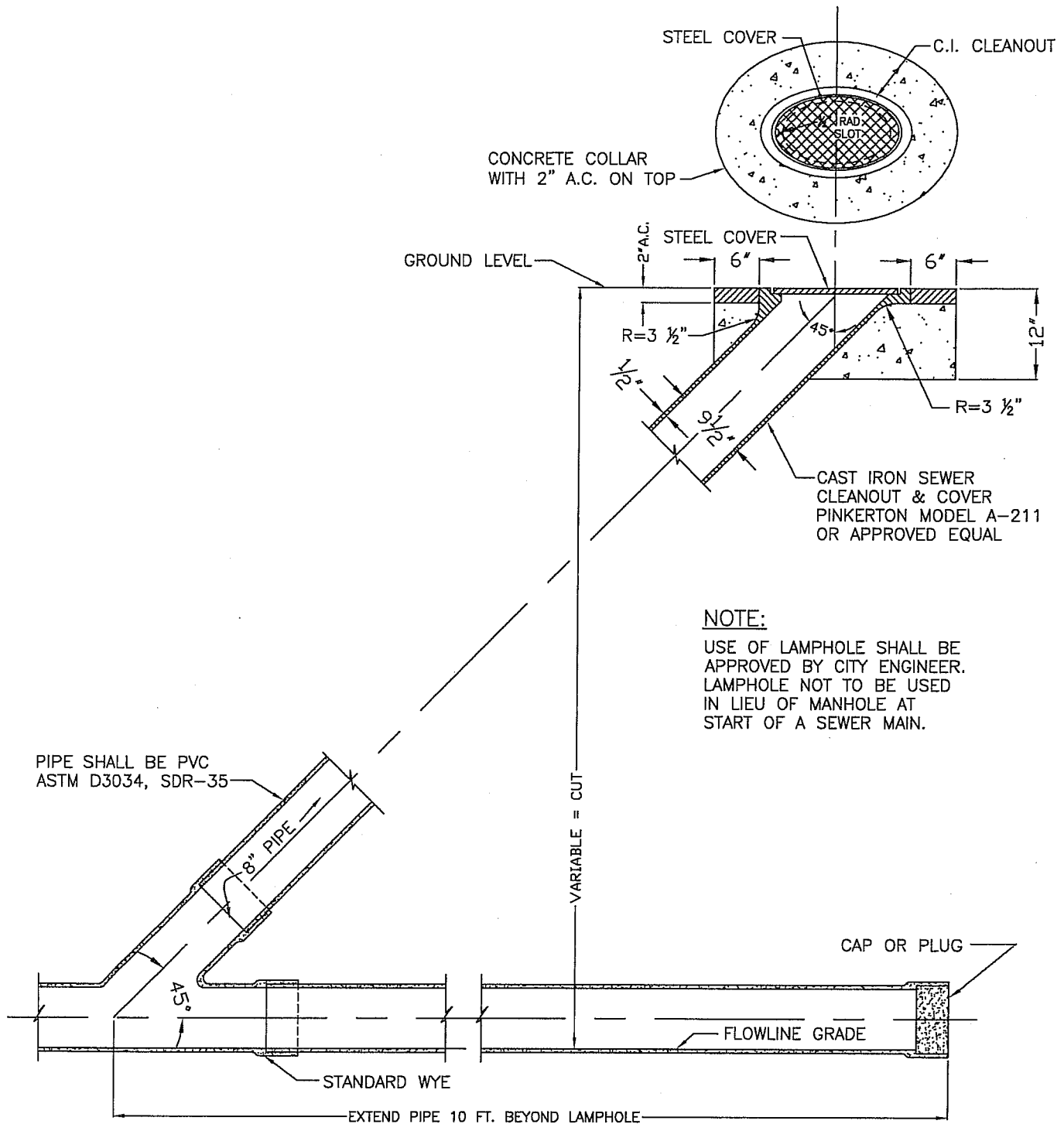
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SHEET 1 OF 1



# CITY OF CLOVIS

DWG NO.

**S-7**

## SEWER LAMPHOLE

REF. STD. SPECIFICATIONS  
SECTION 64

APPROVED BY:

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SCALE: NTS

CITY ENGINEER

DATE:

4/29/09

03-04-09

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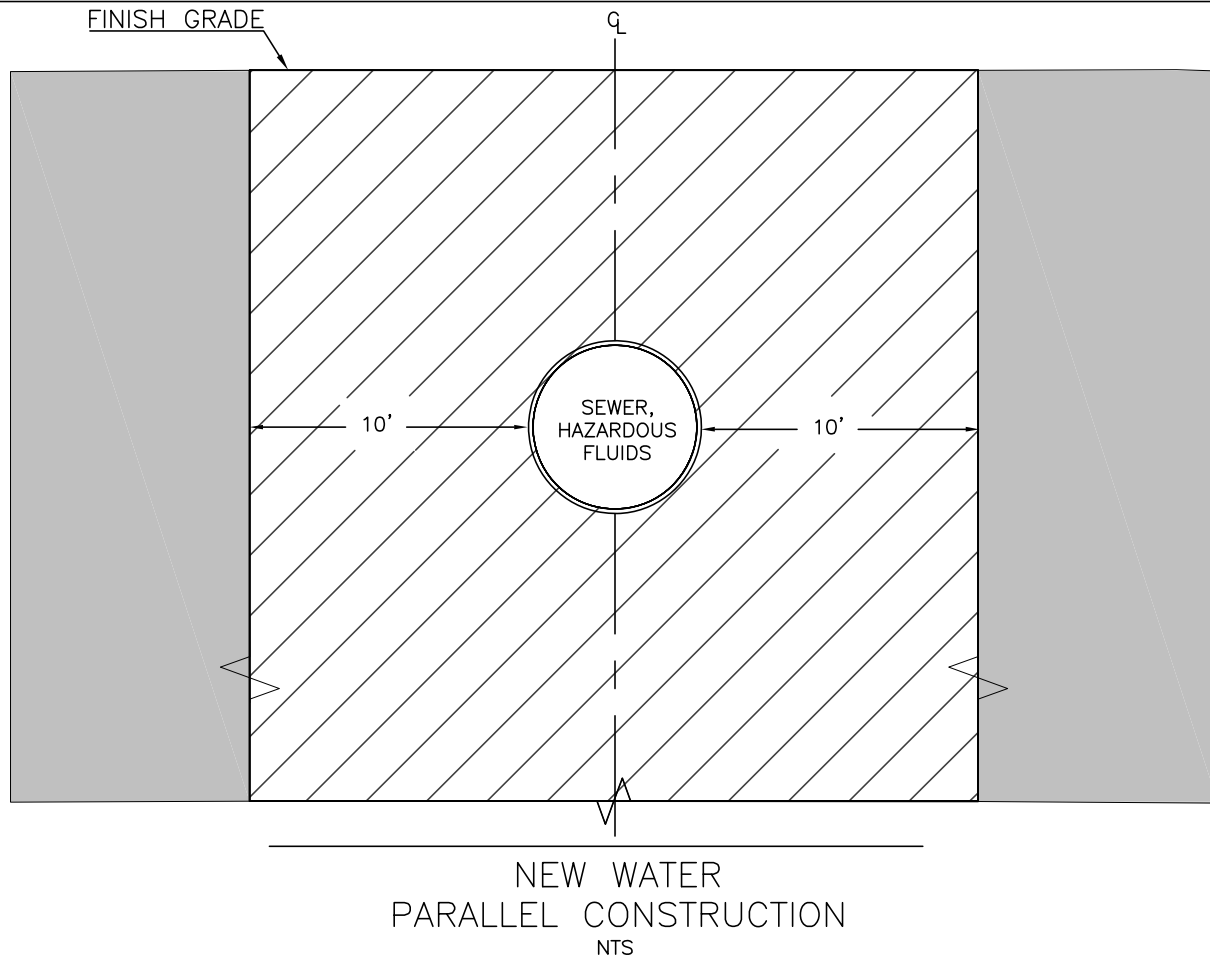
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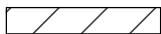
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SHEET 1 OF 1



ALLOWABLE INSTALLATION ZONE



NEW WATER MAINS INSTALLED IN THIS AREA REQUIRE WRITTEN APPROVAL FROM THE STATE WATER RESOURCES CONTROL BOARD (SWRCB)/DIVISION OF DRINKING WATER (DDW), PER SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES MEMO DATED DECEMBER 14, 2017.

#### NOTES:

1. PER 22 CCR 64572, NEW POTABLE WATER MAINS SHALL NOT BE INSTALLED IN THE SAME TRENCH AS, AND SHALL BE AT LEAST TEN (10) FEET HORIZONTALLY FROM, ANY PARALLEL PIPELINE CONVEYING UNTREATED SEWAGE OR HAZARDOUS FLUIDS.
2. THE MINIMUM SEPARATION DISTANCES SHALL BE MEASURED FROM THE NEAREST OUTSIDE EDGE OF EACH BARREL.
3. REQUIREMENTS SET FORTH IN THIS STANDARD DETAIL ARE PER "SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES" MEMO DATED DECEMBER 14, 2017 ISSUED BY THE STATE WATER RESOURCES CONTROL BOARD/DIVISION OF DRINKING WATER. IN THE EVENT THIS MEMO IS SUPERCEDED, THE INSTALLATION OF NEW WATER MAINS SHALL COMPLY WITH THE LATEST WATER MAIN SEPARATION REQUIREMENTS FROM THE STATE WATER RESOURCES CONTROL BOARD/DIVISION OF DRINKING WATER.



# CITY OF CLOVIS

## PARALLEL CONSTRUCTION SEPARATION FOR SEWER AND WATER MAIN

DWG NO.

**S-8**

REF. STD. SPECIFICATIONS  
SECTION 64

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CITY ENGINEER

DATE:

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APPROVALS

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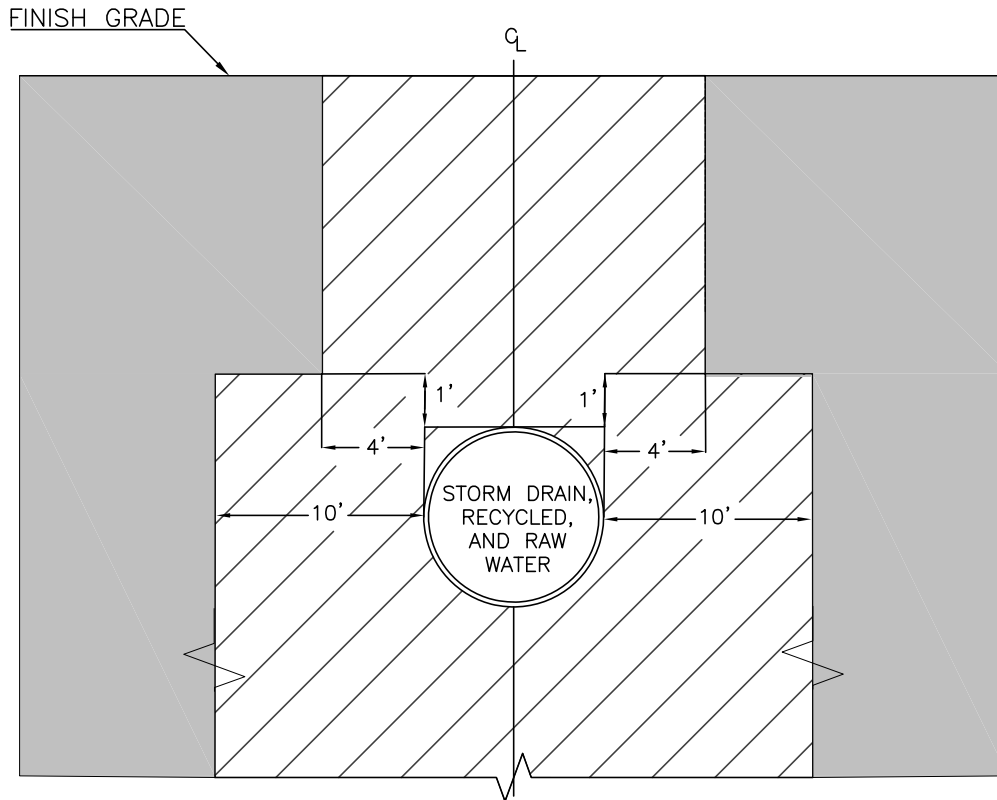
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SHEET 1 OF 1





NEW WATER  
PARALLEL CONSTRUCTION  
NTS

 ALLOWABLE INSTALLATION ZONE

 NEW WATER MAINS INSTALLED IN THIS AREA REQUIRE WRITTEN APPROVAL FROM THE STATE WATER RESOURCES CONTROL BOARD (SWRCB)/DIVISION OF DRINKING WATER (DDW), PER SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES MEMO DATED DECEMBER 14, 2017.

**NOTES:**

1. PER 22 CCR 64572, NEW POTABLE WATER MAINS SHALL NOT BE INSTALLED IN THE SAME TRENCH AS, AND SHALL BE AT LEAST FOUR (4) FEET HORIZONTALLY FROM, AND ONE (1) FOOT VERTICALLY ABOVE ANY PARALLEL PIPELINE CONVEYING DISINFECTED TERTIARY RECYCLED WATER OR STORM DRAINAGE, OR SHALL BE AT LEAST TEN (10) FEET HORIZONTALLY FROM ANY PARALLEL PIPELINE CONVEYING DISINFECTED TERTIARY RECYCLED WATER OR STORM DRAINAGE.
2. THE MINIMUM SEPARATION DISTANCES SHALL BE MEASURED FROM THE NEAREST OUTSIDE EDGE OF EACH BARREL.
3. REQUIREMENTS SET FORTH IN THIS STANDARD DETAIL ARE PER "SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES" MEMO DATED DECEMBER 14, 2017 ISSUED BY THE STATE WATER RESOURCES CONTROL BOARD/DIVISION OF DRINKING WATER. IN THE EVENT THIS MEMO IS SUPERCEDED, THE INSTALLATION OF NEW WATER MAINS SHALL COMPLY WITH THE LATEST WATER MAIN SEPARATION REQUIREMENTS FROM THE STATE WATER RESOURCES CONTROL BOARD/DIVISION OF DRINKING WATER.



# CITY OF CLOVIS

## PARALLEL CONSTRUCTION SEPARATION FOR WATER MAIN AND OTHER UTILITIES

DWG NO.

**S-8A**

REF. STD. SPECIFICATIONS  
SECTION 64

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BY

APPROVALS

SCALE: NTS

CITY ENGINEER



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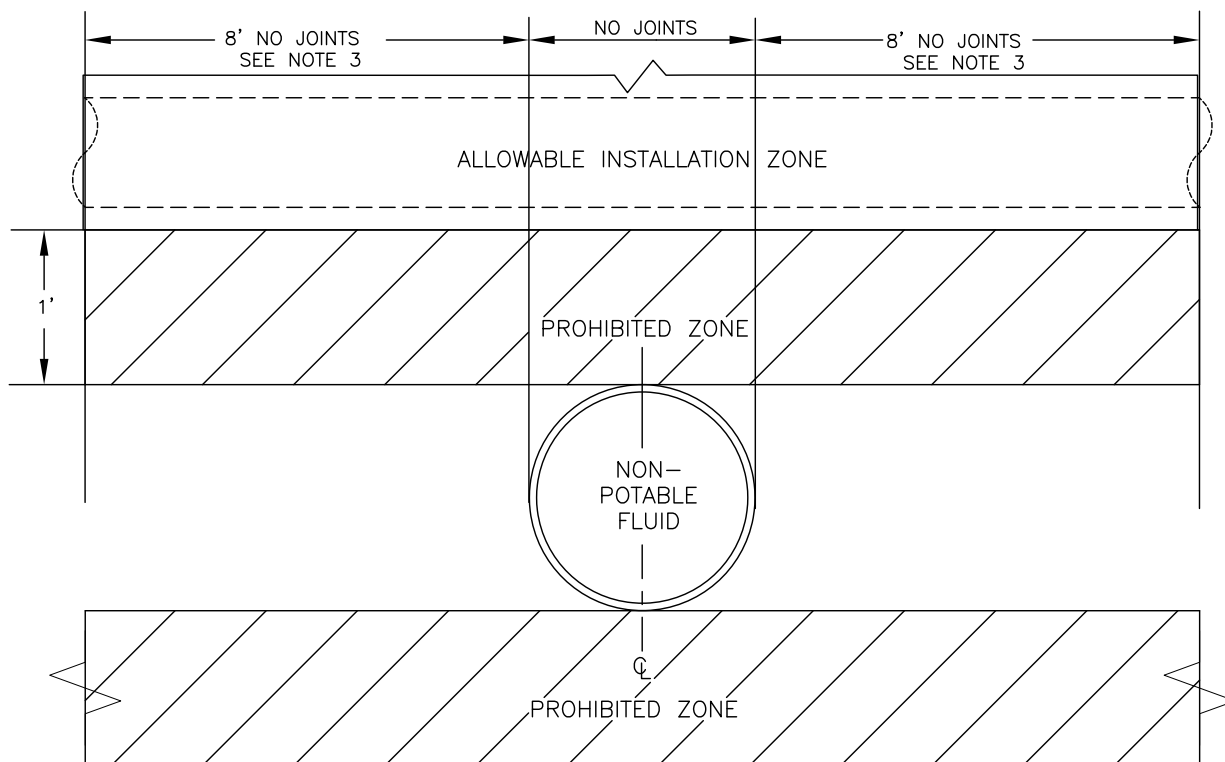


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SHEET 1 OF 1



NEW WATER  
PERPENDICULAR CROSSING  
NTS

 NEW WATER MAINS INSTALLED IN THIS AREA REQUIRE WRITTEN APPROVAL FROM THE STATE WATER RESOURCES CONTROL BOARD (SWRCB)/DIVISION OF DRINKING WATER (DDW), PER SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES MEMO DATED DECEMBER 14, 2017.

NOTES:

1. FOR PERPENDICULAR CROSSINGS, WATER MAIN CROSSINGS SHALL BE CONSTRUCTED AT AN ANGLE OF NO LESS THAN 45 DEGREES, MEASURED FROM THE CENTERLINES OF THE CROSSING PIPELINES AND AT LEAST ONE (1) FOOT VERTICALLY ABOVE SEWER, STORM DRAIN, HAZARDOUS FLUIDS, OR RECYCLED WATER MAINS, WHERE THESE MAINS MUST CROSS, MEASURED FROM NEAREST OUTSIDE EDGE.
2. FOR PERPENDICULAR CROSSINGS, NO CONNECTION JOINTS SHALL BE MADE IN THE WATER MAIN WITHIN EIGHT (8) HORIZONTAL FEET OF THE NON-POTABLE FLUID PIPELINE, MEASURED FROM NEAREST OUTSIDE EDGE.
3. REQUIREMENTS SET FORTH IN THIS STANDARD DETAIL ARE PER "SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES" MEMO DATED DECEMBER 14, 2017 ISSUED BY THE STATE WATER RESOURCES CONTROL BOARD/DIVISION OF DRINKING WATER. IN THE EVENT THIS MEMO IS SUPERCEDED, THE INSTALLATION OF NEW WATER MAINS SHALL COMPLY WITH THE LATEST WATER MAIN SEPARATION REQUIREMENTS FROM THE STATE WATER RESOURCES CONTROL BOARD/DIVISION OF DRINKING WATER.



# CITY OF CLOVIS

DWG NO.

**S-9**

## SEWER AND WATER MAIN CROSSING CONSTRUCTION SEPARATION

REF. STD. SPECIFICATIONS  
SECTION 64

APPROVED BY:

NO.

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BY

APPROVALS

SCALE: NTS

CITY ENGINEER

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04-08-19

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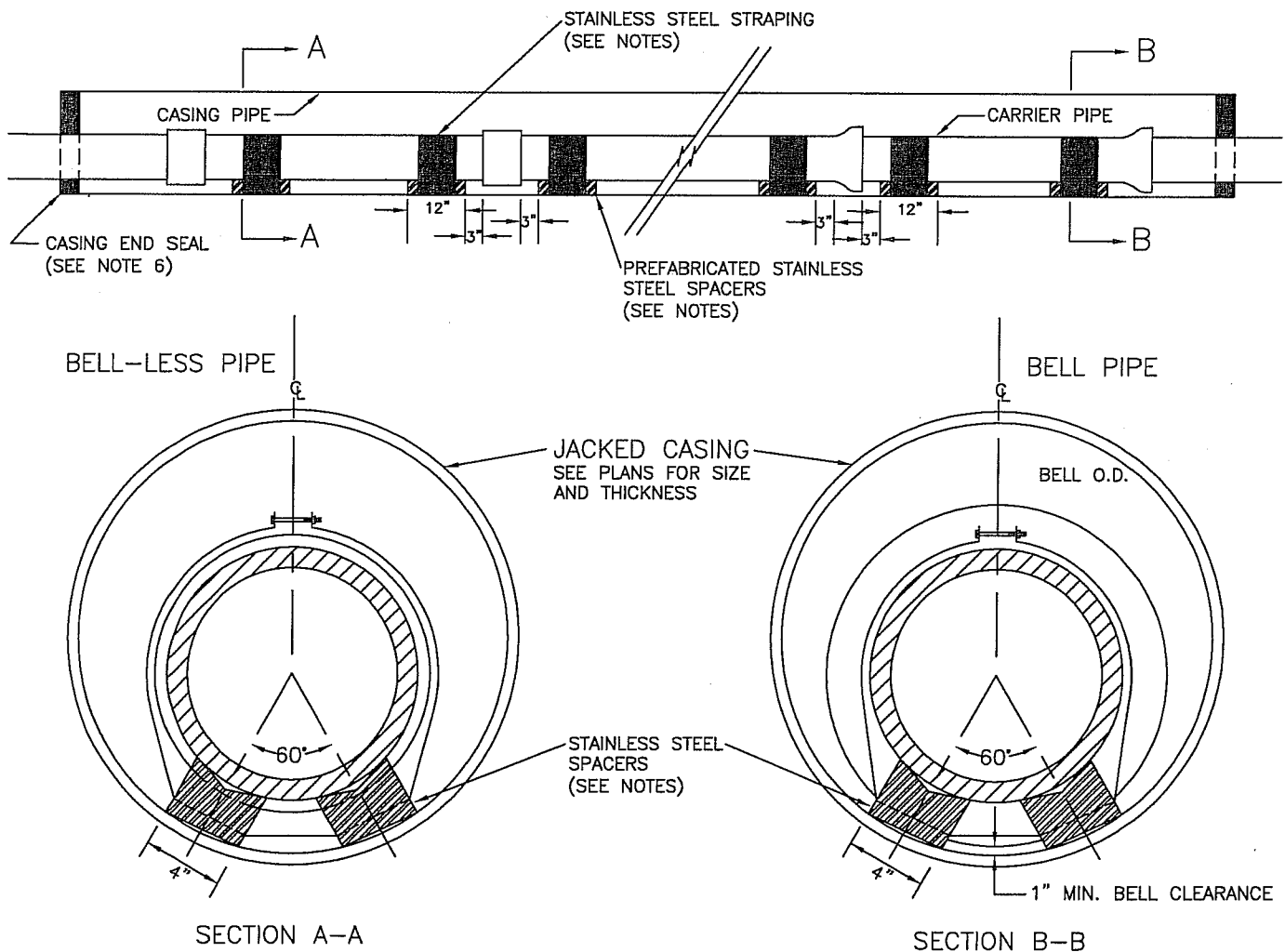
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SHEET 1 OF 1



#### NOTES:

1. CASING PIPE SHALL BE BUTT WELDED SHEETS, ASTM A-570 COMMERCIAL GRADE OR BUTT WELDED PLATES, ASTM A-283. SIZE AND STRENGTH AS SHOWN ON PLANS.
2. CASING SPACERS SHALL BE PREFABRICATED STAINLESS STEEL DESIGNED & MFG. BY PIPELINE SEAL & INSULATOR, INC., HOUSTON, TX., OR APPROVED EQUAL. FOR CARRIER PIPES 24" DIAM. OR LESS, USE PSI MODEL S8G-2; GREATER THAN 24" USE PSI MODEL S12G-2.
3. CASING SPACERS SHALL BE SPECIFICALLY DESIGNED AND FABRICATED FOR THE SPECIFIC PROJECT, AND ELECTRICALLY ISOLATE CARRIER PIPE FROM CASING PIPE.
4. SPACER BANDS SHALL BE 304 STAINLESS STEEL, 8" WIDE FOR PIPES 24" DIAM. OR LESS, AND 12" WIDE FOR PIPES LESS THAN 42" DIAM.
5. SPACER BANDS SHALL BE 3 OR MORE SEGMENT, 12 GA. BANDS TO BE FITTED WITH FLEXIBLE PVC LINER ON INNER SURFACE OF BAND; LINER TO BE 0.09" THICK, HARDNESS OF 85-90 (ASTM D2240, DUROMETER "A"), DIELECTRIC STRENGTH NOT LESS THAN 58,000 VOLTS (ASTM D149). HARDWARE TO BE STAINLESS STEEL.
6. CASING ENDS SHALL BE SEALED WITH PIPELINE SEAL & INSULATOR, INC. MODEL "C" OR MODEL "S", OR APPROVED EQUAL. CONCRETE SHALL NOT BE USED UNLESS SPECIFICALLY APPROVED BY THE CITY ENGINEER OR IS SHOWN ON THE PLANS.



# CITY OF CLOVIS

## INSTALLATION OF CARRIER PIPE IN JACKED STEEL CASING

DWG NO.

**S-10**

REF. STD. SPECIFICATIONS  
SECTION 68

APPROVED BY:

NO.

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BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

6/29/09

03-04-09

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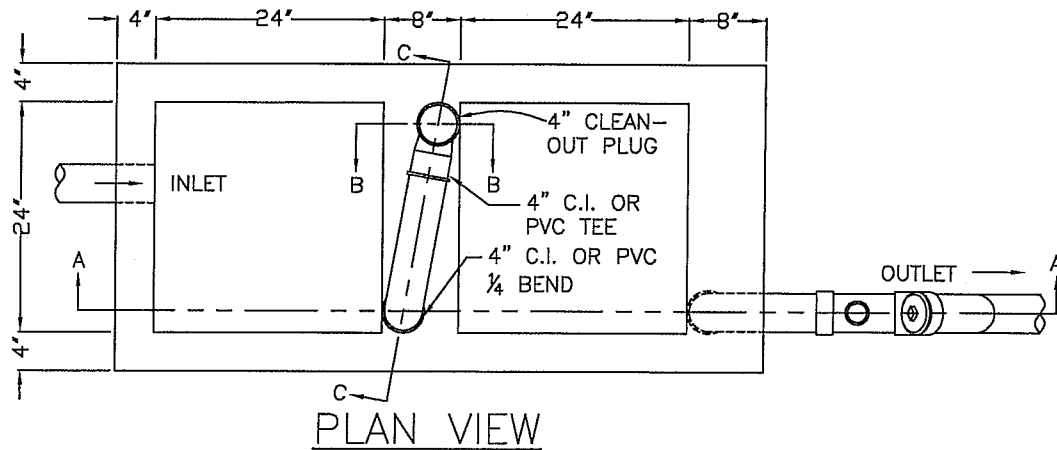
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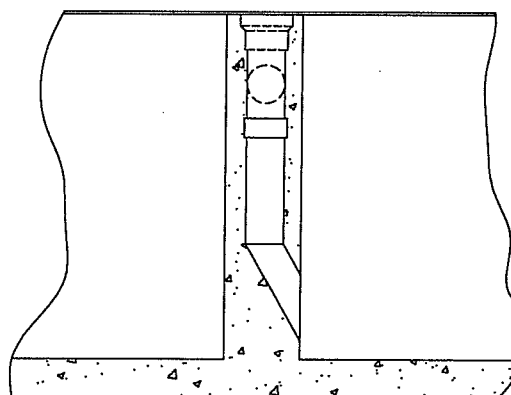
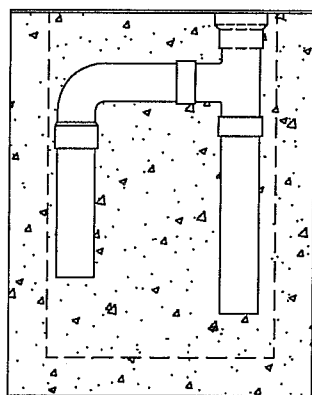
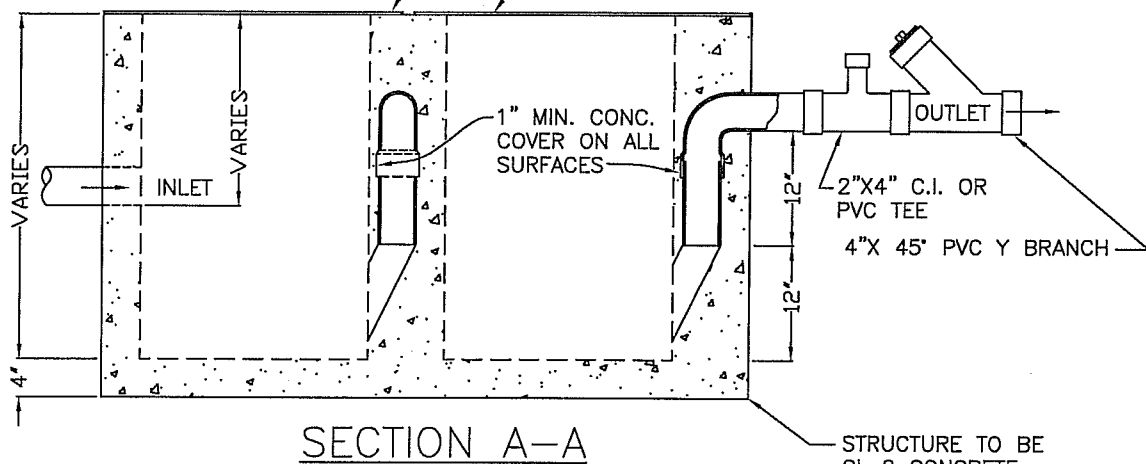
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SHEET 1 OF 1



32"x32" BOILER PLATE COVER 1/4" THICK,  
 1/2" PERFORATION, 3" ON CENTERS

36"x32" BOILER PLATE COVER 1/4" THICK,  
 NO PERFORATION



# CITY OF CLOVIS

## COMMERCIAL & INDUSTRIAL GREASE TRAP

DWG NO.  
**S-11**

STANDARD REF:  
 U.B.C.

APPROVED BY:

CITY ENGINEER

DATE:

NO.

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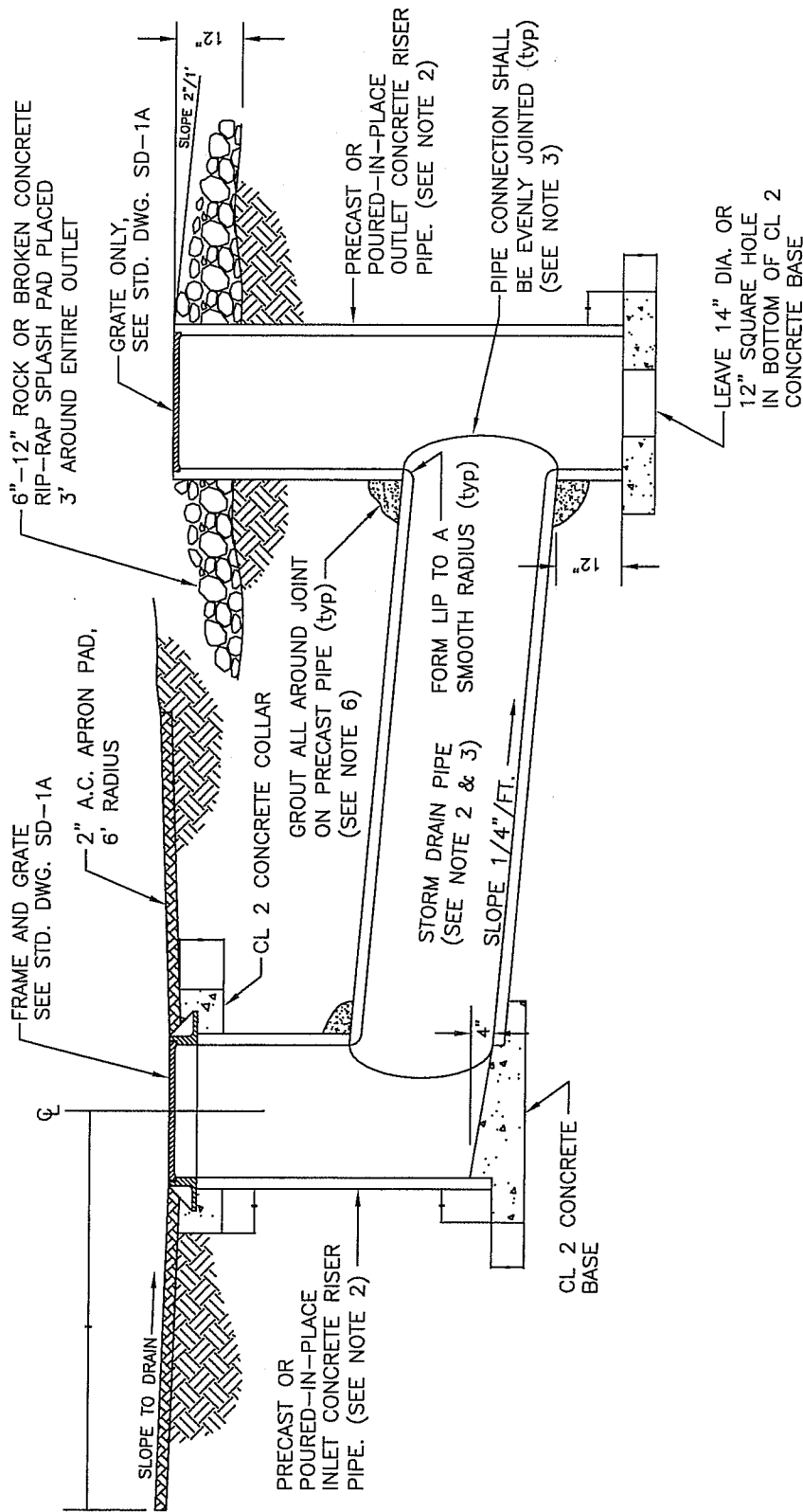
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SHEET 1 OF 1

# TEMPORARY INLET

# TEMPORARY BASIN OUTLET



## NOTES:

1. PRECAST CONCRETE RISER PIPE SHALL CONFORM TO A.S.T.M. DESIGNATION C 118. CONCRETE FOR CAST-IN-PLACE SHALL BE CL 2.
2. RISER AND CONNECTOR PIPE SHALL BE 24" DIAM. MIN. UNLESS OTHERWISE NOTED ON THE PLANS.
3. STORM DRAIN PIPE SHALL BE CL III RCP NEATLY CUT AS NECESSARY TO FORM AN EVEN CONNECTION WITH RISER PIPE. IN ADDITION, THE LIP OF THE STORM DRAIN PIPE SHALL BE SMOOTHLY ROUNDED TO AN APPROX. 3" RADIUS ALL AROUND.
4. BASE FOR 24" RISER PIPE SHALL BE CLASS 2 CONCRETE.
5. INLET FLOOR SHALL SLOPE FROM ALL WALLS TO THE FLOWLINE AND SHALL BE GIVEN A STEEL-TROWELED FINISH.
6. CONNECTION JOINT BETWEEN STORM DRAIN PIPE AND RISER PIPE SHALL BE FILLED AND COLLARED WITH MORTAR OR CONCRETE.
7. SEE STD. DWG. SD-1A FOR FRAME AND GRATE DETAILS.
8. FOR CROSS DRAIN APPLICATIONS, USE INLET ON BOTH ENDS. CONNECTOR PIPE SHALL SLOPE 1/4"/FT TO DESIGNATED INLET.



## CITY OF CLOVIS

### TEMPORARY DRAINAGE INLET AND BASIN OUTLET

DWG NO.

**SD-1**

REF: STD. SPECIFICATIONS  
SECTION 63

APPROVED BY:

CITY ENGINEER

DATE:

6/29/09

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03-13-09

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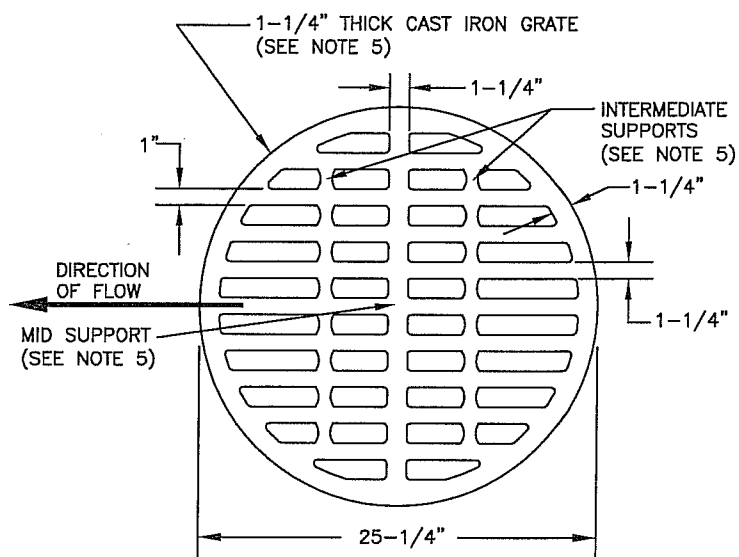
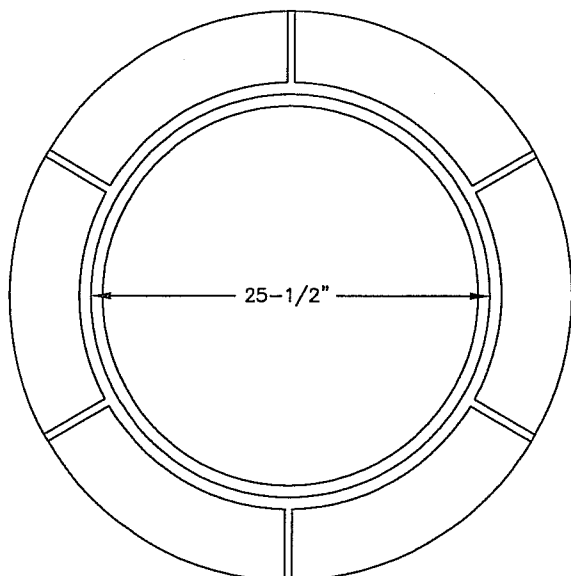
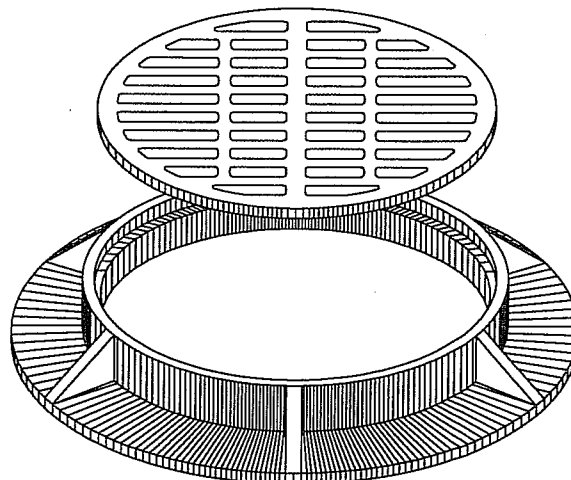
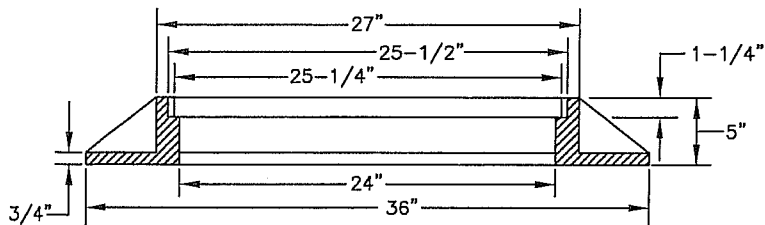
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SCALE: NTS

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SHEET 1 OF 1



# NOTES:

1. ALL DIMENSIONS ARE FINISHED DIMENSIONS. FRAME AND COVER BEARING SURFACE TO BE MACHINED TO ASSURE CLOSE, QUIET FIT.
2. CONSTRUCTION MATERIAL SHALL BE CAST IRON, DIPPED IN BLACK BITUMINOUS PAINT.
3. FRAME AND GRATE TO BE MODEL C-7-SBF 1000 MFG. BY SOUTH BAY FOUNDRY, INC., OR APPROVED EQUAL, CONSTRUCTED IN ACCORDANCE WITH A.S.T.M. DESIGNATION 48, CLASS 35B, AND EXCEED H2O WHEEL LOADING.
4. GRATE TO BE INSTALLED SUCH THAT THE SLOTS ARE PARALLEL WITH THE DIRECTION OF WATER FLOW.
5. GRATES WITH MID AND INTERMEDIATE SUPPORTS SHALL BE USED AT ALL LOCATIONS WHERE BICYCLE OR OTHER WHEELED TRANSPORT SUCH AS WHEEL CHAIRS CAN BE ANTICIPATED. COVERS WITHOUT INTERMEDIATE SUPPORTS SHALL NOT BE USED WITHOUT APPROVAL OF THE CITY ENGINEER.



## CITY OF CLOVIS

DWG NO.

SD-1A

### TEMPORARY INLET FRAME & GRATE

REF: STD. SPECIFICATIONS  
SECTION 63

APPROVED BY:

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SCALE: NTS

CITY ENGINEER

DATE:

6/29/09

03-13-09

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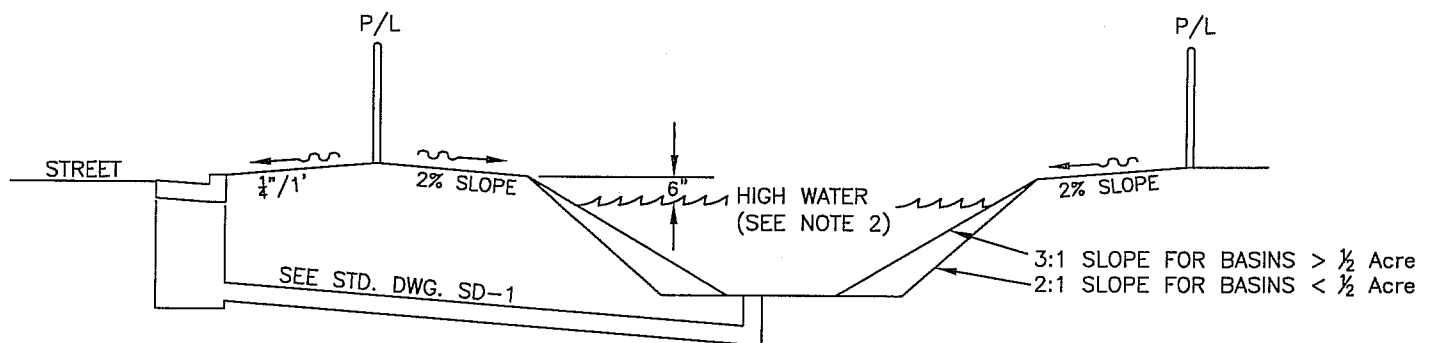
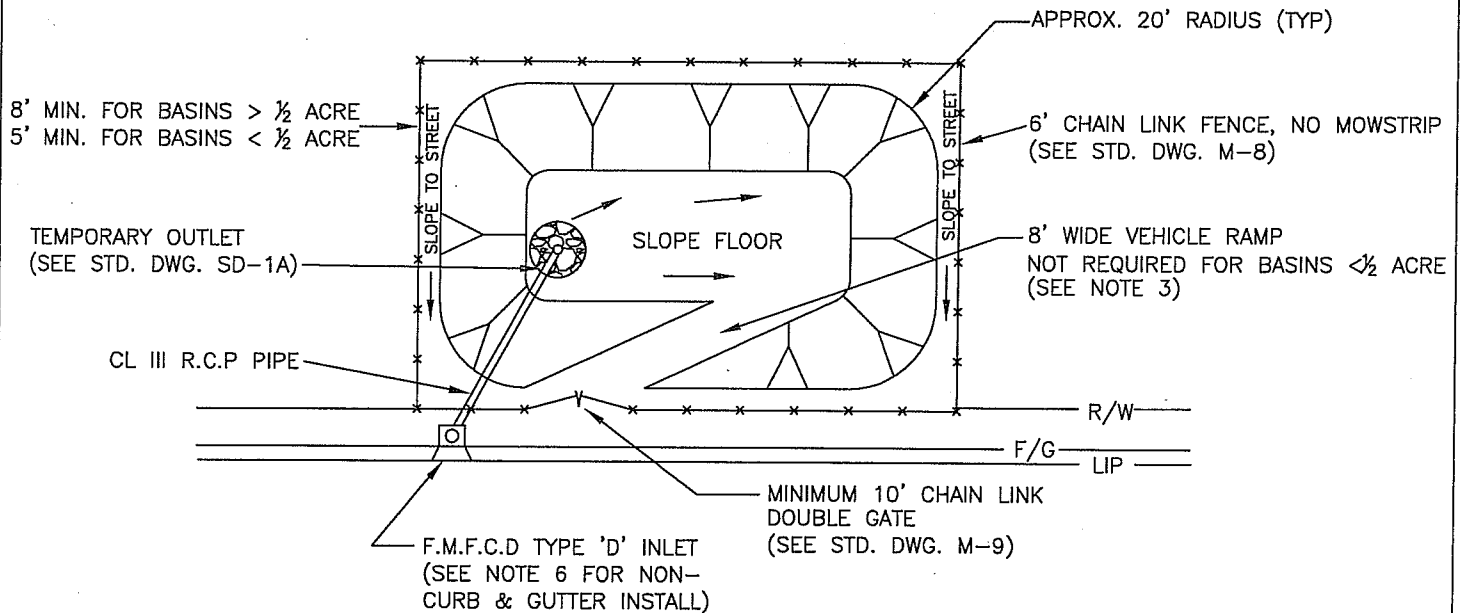
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SHEET 1 OF 1



### CAPACITY

$$V = \frac{5}{12} CA$$

V = REQUIRED CAPACITY IN ACRE FEET  
C = RUNOFF COEFFICIENT OF DRAINAGE AREA  
A = DRAINAGE AREA IN ACRES

### NOTES:

1. BASIN SITE SHALL BE GRADED SUCH THAT BASIN DESIGN OVERFLOW MUST BE TO THE STREET.
2. DESIGN HIGH WATER ELEVATION SHALL BE 6" LOWER THAN LOWEST SYSTEM INLET GUTTER FLOWLINE OR POND PERIPHERAL ELEVATION, WHICHEVER IS LOWER.
3. VEHICLE RAMPS SHALL BE 8' MINIMUM WIDTH AND 15% MAXIMUM SLOPE.
4. BASIN SHALL BE COMPLETELY FENCED AND SECURED WITHIN 7 DAYS OF CONSTRUCTION, AND PRIOR TO ANY INTRODUCTION OF WATER.
5. BASIN DEWATERING FACILITIES CONSISTING OF A 4" COUPLER AND CAP, 4" GATE VALVE, UTILITY BOX, AND 4" CLASS 200 PVC DRAIN LINE TO DEWATERING POINT MAY BE REQUIRED.
6. FOR UNIMPROVED OR NON-CURB & GUTTER APPLICATIONS, USE INLET AS SHOWN ON STD. DWG. SD-1.



# CITY OF CLOVIS

## TEMPORARY DRAINAGE BASIN

DWG NO.

SD-2

APPROVED BY:

CITY ENGINEER

DATE:

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BY

APPROVALS

SCALE: NTS

03-13-09

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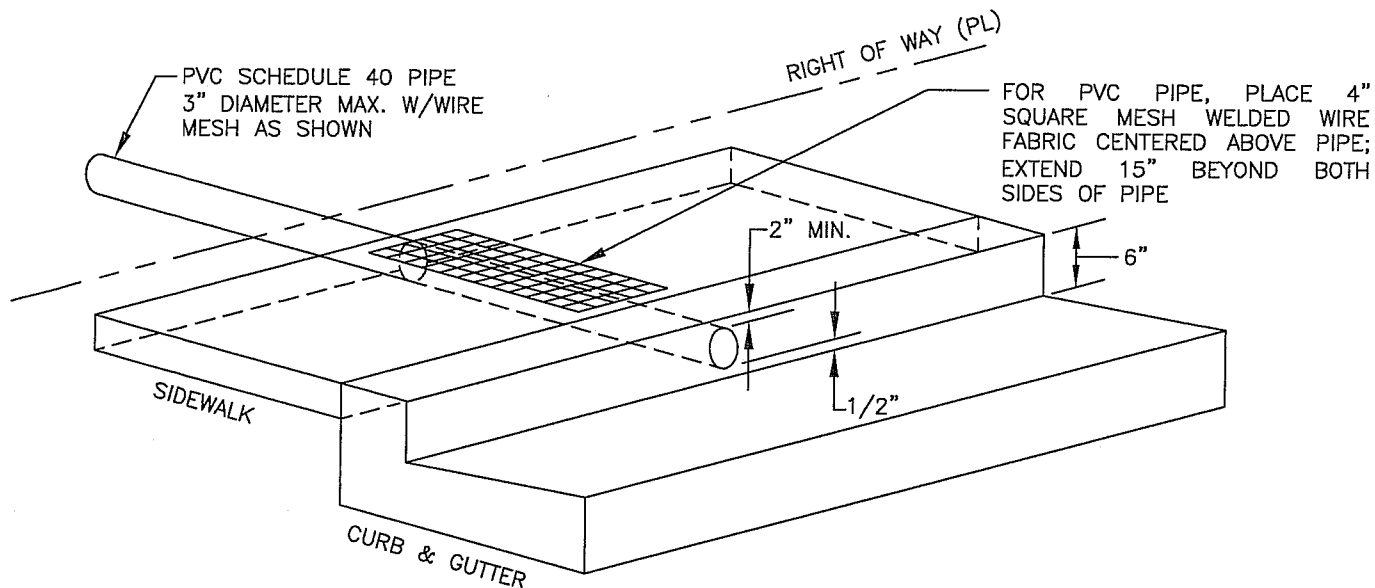
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SHEET 1 OF 1



NOTES:

1. WHERE SIDEWALK, CURB AND GUTTER EXIST, SIDEWALK, CURB AND GUTTER SHALL BE REMOVED AND REPLACED TO THE NEAREST JOINT AND SHALL BE CONSTRUCTED PER APPLICABLE CITY OF CLOVIS STANDARD DRAWINGS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AN ENCROACHMENT PERMIT FOR ANY WORK WITHIN THE CITY RIGHT OF WAY, INCLUDING THE REMOVAL AND REPLACEMENT OF THE SIDEWALK, CURB AND GUTTER AND THE CONSTRUCTION OF THE RESIDENTIAL UNDER SIDEWALK DRAIN, FROM THE CITY OF CLOVIS ENGINEERING DIVISION.
3. THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (USA) TWO WORKING DAYS PRIOR TO DIGGING. NO INSPECTION WILL BE PROVIDED AND NO CONSTRUCTION PERMIT ISSUED INVOLVING EXCAVATION FOR UNDERGROUND FACILITIES WILL BE VALID UNLESS THE APPLICANT HAS BEEN PROVIDED AN INQUIRY IDENTIFICATION NUMBER BY USA.
4. THE CONTRACTOR SHALL PROVIDE A CERTIFICATE OF INSURANCE NAMING THE CITY OF CLOVIS AS AN ADDITIONAL INSURED IN ACCORDANCE WITH THE ENCROACHMENT PERMIT PROCESS.
5. THE ENGINEER OF RECORD SHALL DETERMINE THE NUMBER OF DRAINS REQUIRED.



# CITY OF CLOVIS

DWG NO.

**SD-3**

## RESIDENTIAL SIDEWALK DRAIN

APPROVED BY:

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REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

6/29/09

03-13-09

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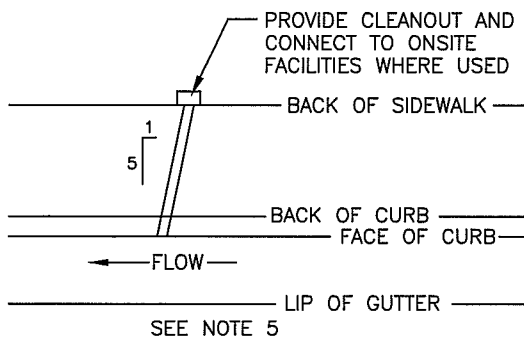
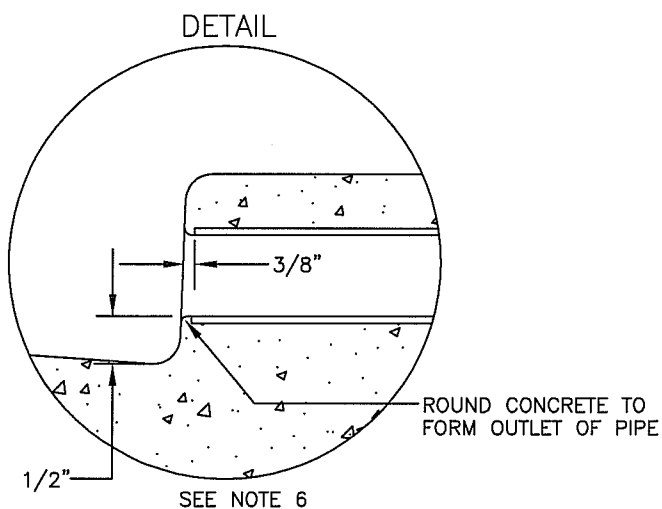
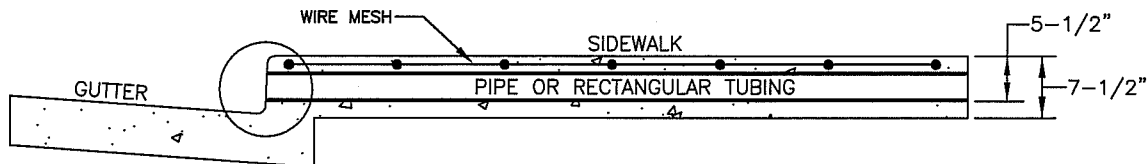
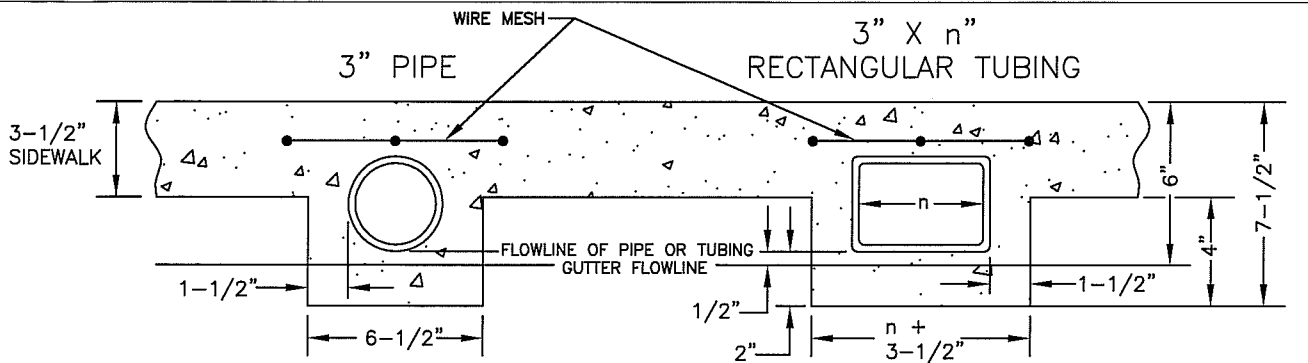
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SHEET 1 OF 1





#### NOTES:

- 3" PIPE SHALL BE GALVANIZED PIPE. RECTANGULAR TUBING SHALL BE STEEL.
- MINIMUM WALL THICKNESS OF RECTANGULAR TUBING IS 3/16".
- SLOPE SHALL MATCH CROSS GRADE OF SIDEWALK AT 1/4" per FOOT.
- NO DRAIN SHALL BE PERMITTED IN DRIVE APPROACH AREAS.
- DRAINS SHALL BE ANGLED THROUGH SIDEWALK IN DIRECTION OF GUTTER FLOW, SEE DETAIL.
- PIPE OR TUBING SHALL BE CUT SQUARE AND ROUNDED WITH FACE OF CURB, SEE DETAIL.
- PERMITTED SIZE AND NUMBER OF PIPES/TUBING TO BE BASED ON DRAINAGE AREA AND SHALL BE DETERMINED BY THE ENGINEER OF RECORD.
- AREA 3" DIA. PIPE = 7.1 SQ.IN.  
AREA 3"x5" RECT. TUBE = 12.3 SQ.IN. (3/16" THICK)  
AREA 3"x6" RECT. TUBE = 14.9 SQ.IN. (3/16" THICK)
- NOTES 1 THROUGH 4 OF STD. DWG. SD-3 FOR CONSTRUCTION AND ENCROACHMENT. PERMIT REQUIREMENTS APPLY TO THIS STD. DWG. ALSO.



# CITY OF CLOVIS

DWG NO.

## SD-4

### COMMERCIAL SIDEWALK DRAIN

APPROVED BY:

CITY ENGINEER:

DATE:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

03-16-09

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DRAWN BY: BGJ

07-28-09

BGJ

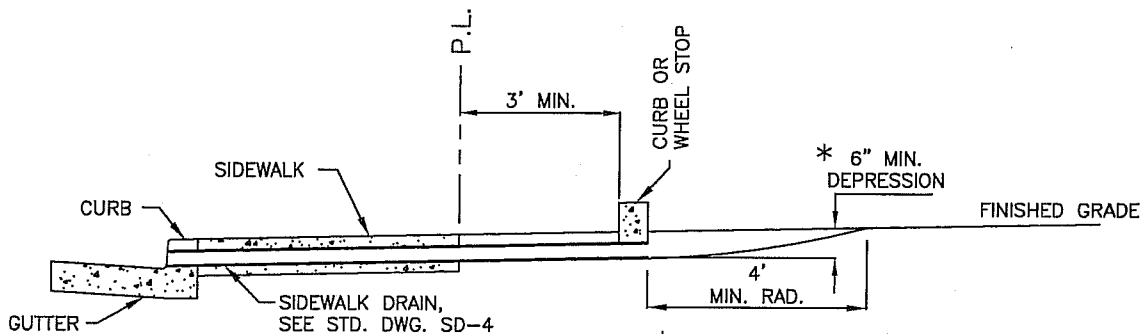
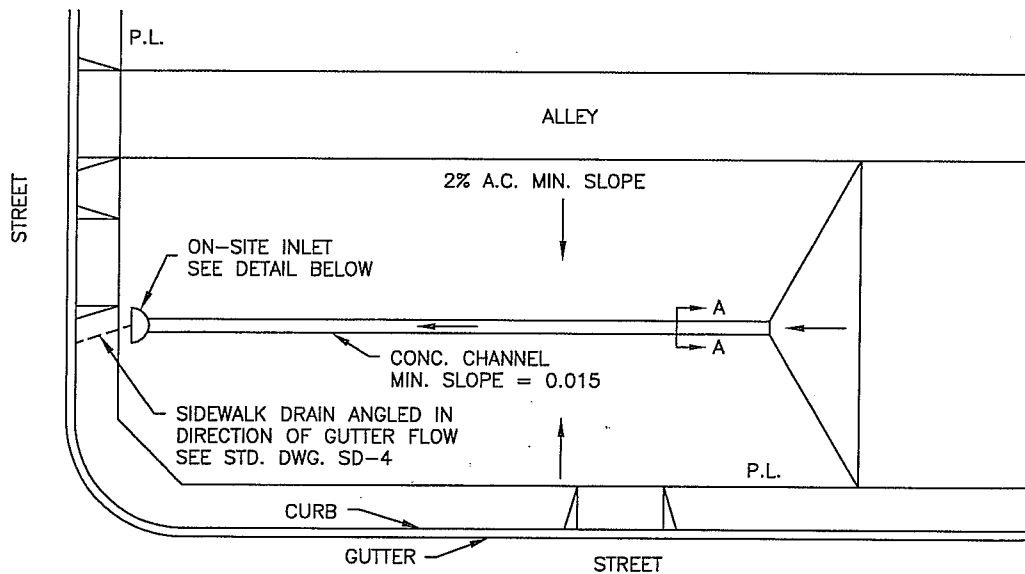
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SHEET 1 OF 1

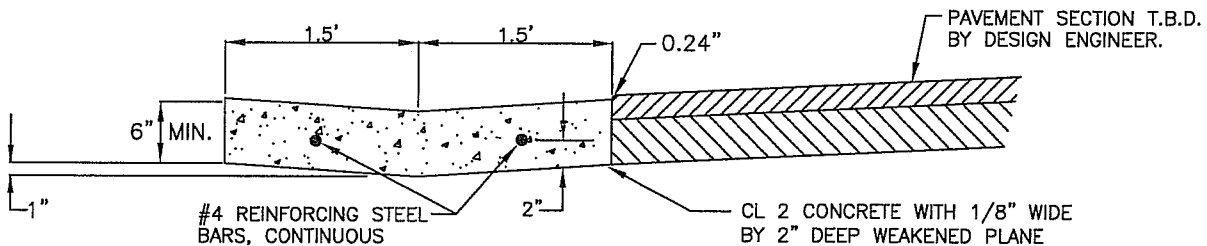
01-30-14

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\* IN LIEU OF DEPRESSED INLET A CRISTY NO. U-23 CATCH BASIN (2'x2'x2' MIN. DEPTH) WITH HEAVY DUTY TRAFFIC GRATE TO WITHSTAND TRAFFIC LOADING, OR A BROOKS W-100 SERIES 2'x3' UTILITY BOX NO. 100TG. TRAFFIC GRATE OR APPROVED EQUAL MAY BE USED.



SECTION A-A

SURFACE DRAINAGE TO ALLEY ONLY BY WRITTEN APPROVAL OF THE CITY ENGINEER.



# CITY OF CLOVIS

## LOT DRAINAGE DETAIL

DWG NO.  
**SD-5**

STANDARD REF:  
N.A.

APPROVED BY:

CITY ENGINEER

DATE:

NO.

REVISED

BY

APPROVALS

03-16-09

BGJ

CM

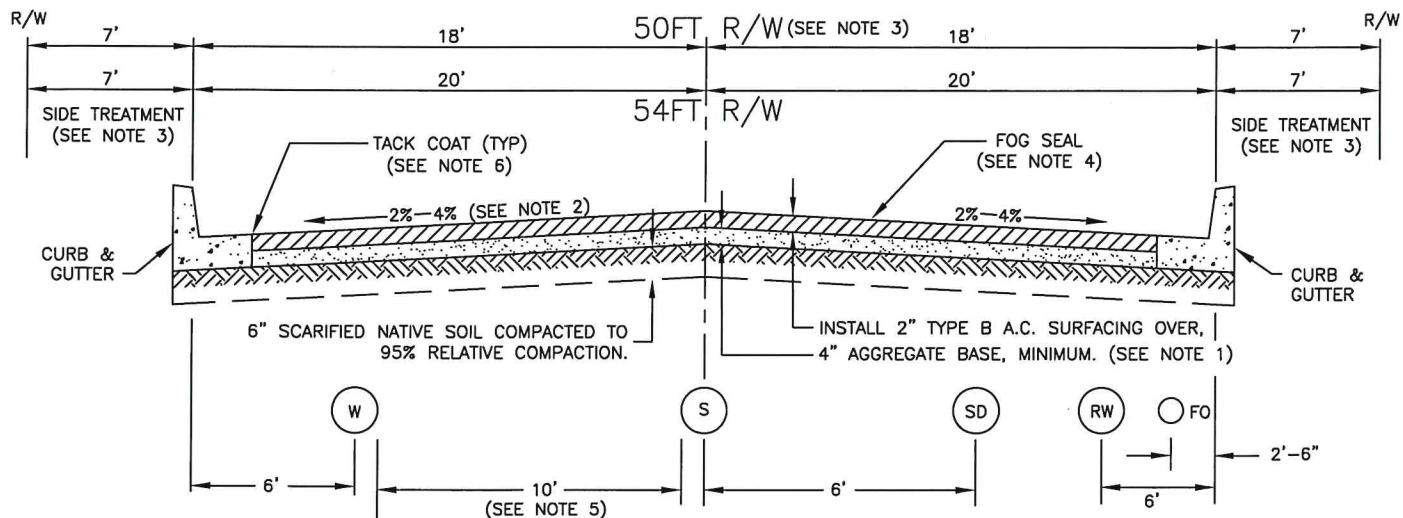
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PUD

SCALE: NTS

DRAWN BY: JA

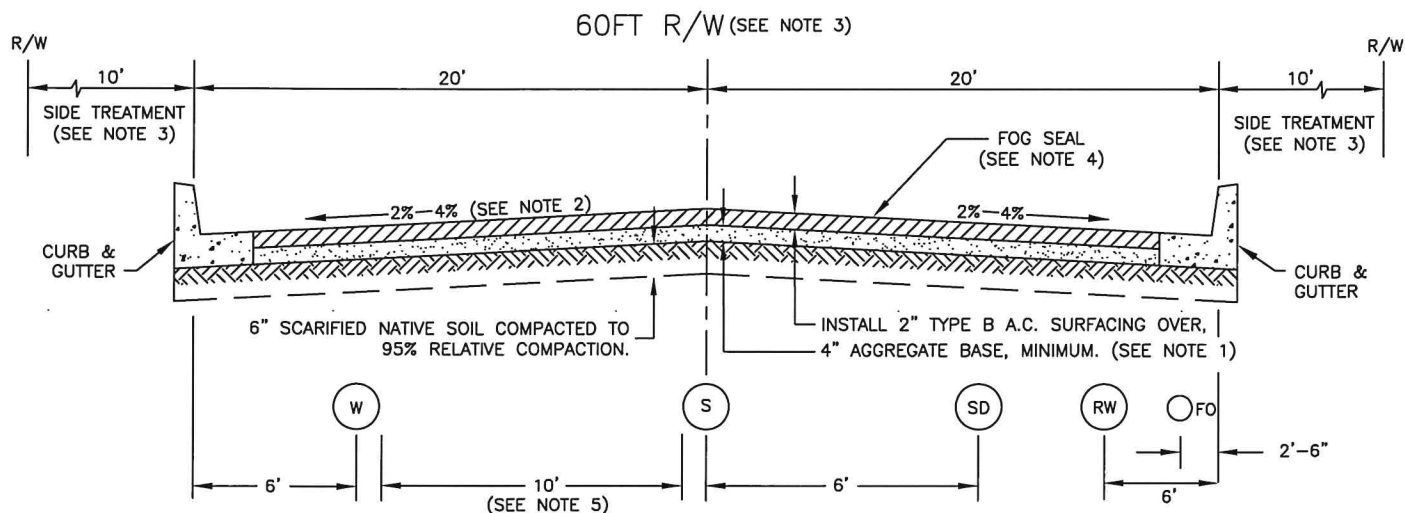
SHEET 1 OF 1



W WATER  
S SEWER

LOCAL ROAD

SD STORM DRAIN  
RW RECYCLED WATER  
FO FIBER OPTIC



LOCAL COLLECTOR

### NOTES:

1. ROADWAY STRUCTURAL SECTIONS SHOWN ARE MINIMUMS. ACTUAL STRUCTURAL COMPONENT VALUES SHALL BE DETERMINED BY SOILS/TRAFFIC ANALYSES FOR "R" VALUE AND TRAFFIC INDEX (TI). IN NO CASE SHALL THE ACTUAL STRUCTURAL SECTION BE LESS THAN THE MINIMUMS SHOWN.
2. PAVEMENT CROSS-SLOPES ARE MINIMUM-MAXIMUM VALUES.
3. SIDEWALK PATTERNS AND R/W WIDTH WILL VARY WITH LOCATION. SEE STD. DRAWING ST-5 FOR "CONCRETE CURB & GUTTER AND SIDEWALK."
4. FOG SEAL SHALL BE APPLIED WHEN SPECIFIED.
5. ALL WET UTILITY SPACING MUST COMPLY WITH THE STATE WATERWORKS STANDARDS (CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 22, DIVISION 4, CHAPTER 16). SEE STANDARD SPECIFICATIONS AND STD DWG S-8, S-8A, AND S-9.
6. APPLY TACK COAT TO GUTTER PAN FACE PRIOR TO PAVING.



# CITY OF CLOVIS

## LOCAL STREET SECTIONS AND UTILITY LOCATIONS

DWG NO.

**ST-1**

REF.: STD. SPECIFICATIONS  
SECTIONS 19, 26, 37,  
39, 73, APPENDIX

APPROVED BY:

CITY ENGINEER

DATE: 2020.12.10  
15:33:05-08'00"

NO.

REVISED

BY

APPROVALS

3

11-22-11

10-27-15

02-11-20

PAA

CGV

CGV

CM

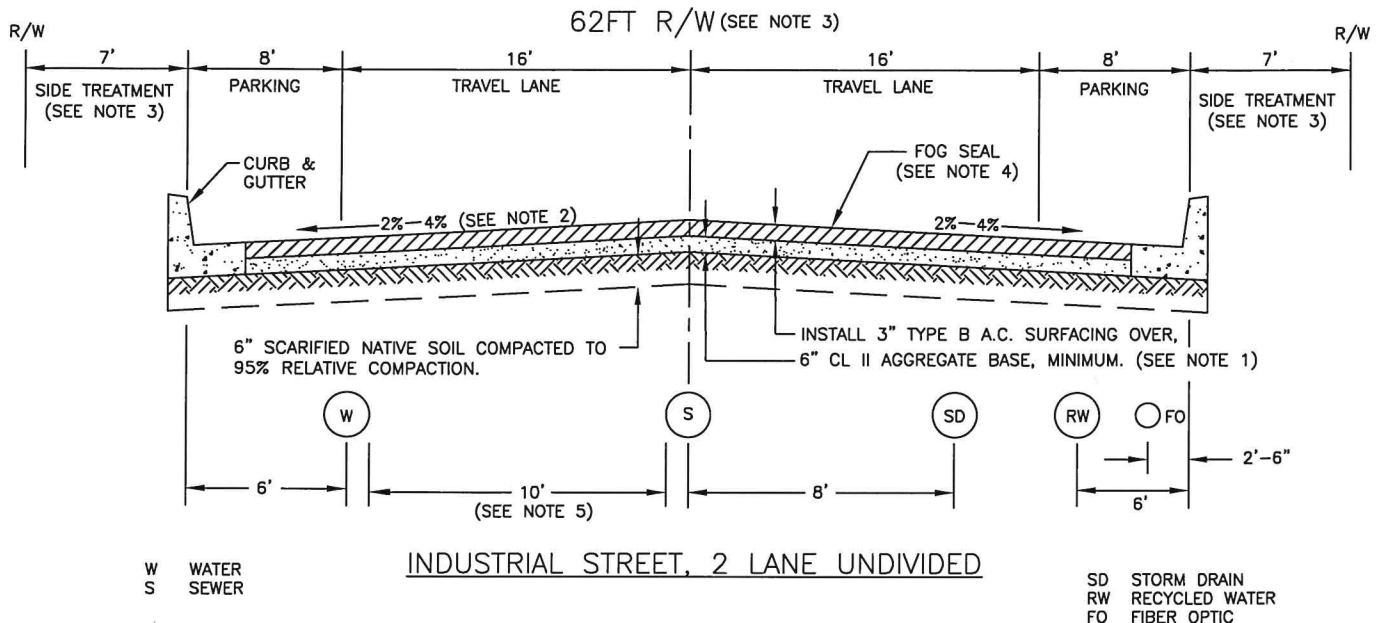
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SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1



#### NOTES:

1. ROADWAY STRUCTURAL SECTIONS SHOWN ARE MINIMUMS. ACTUAL STRUCTURAL COMPONENT VALUES SHALL BE DETERMINED BY SOILS/TRAFFIC ANALYSES FOR "R" VALUE AND TRAFFIC INDEX (TI). IN NO CASE SHALL THE ACTUAL STRUCTURAL SECTION BE LESS THAN THE MINIMUMS SHOWN.
2. PAVEMENT CROSS-SLOPES ARE MINIMUM-MAXIMUM VALUES.
3. SIDEWALK PATTERNS AND R/W WIDTH WILL VARY WITH LOCATION. SEE STD. DRAWING ST-5 FOR "CONCRETE CURB & GUTTER AND SIDEWALK."
4. FOG SEAL SHALL BE APPLIED WHEN SPECIFIED.
5. ALL WET UTILITY SPACING MUST COMPLY WITH THE STATE WATERWORKS STANDARDS (CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 22, DIVISION 4, CHAPTER 16). SEE STANDARD SPECIFICATIONS AND STD DWG S-8, S-8A, AND S-9.
6. ADDITIONAL R/W MAY BE REQUIRED FOR BICYCLE LANES AND BUS TURNOUTS.
7. APPLY TACK COAT TO GUTTER PAN FACE PRIOR TO PAVING.



# CITY OF CLOVIS

## INDUSTRIAL STREET SECTION AND UTILITY LOCATIONS

DWG NO.

# ST-2

REF.: STD. SPECIFICATIONS  
SECTIONS 19, 26, 37,  
39, 73, APPENDIX

APPROVED BY:

CITY ENGINEER

DATE: 15:32:41-08'00'

NO.

REVISED

BY

APPROVALS

SCALE: NTS

4

11-22-11

10-27-15

02-11-20

PAA

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CGV

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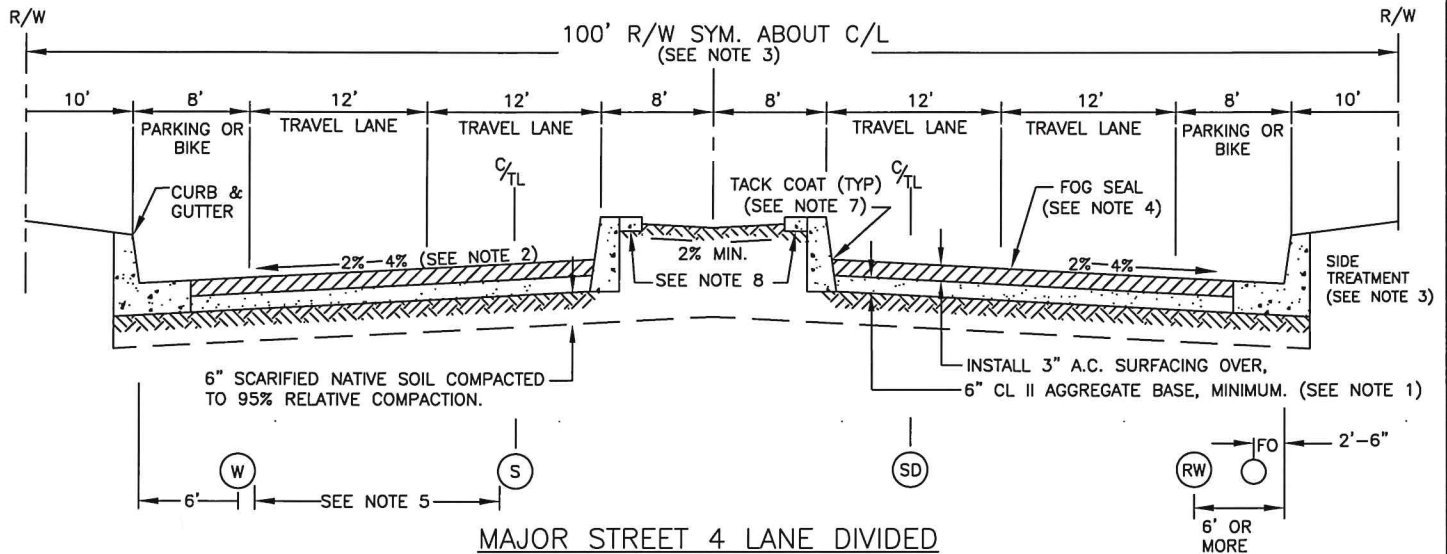
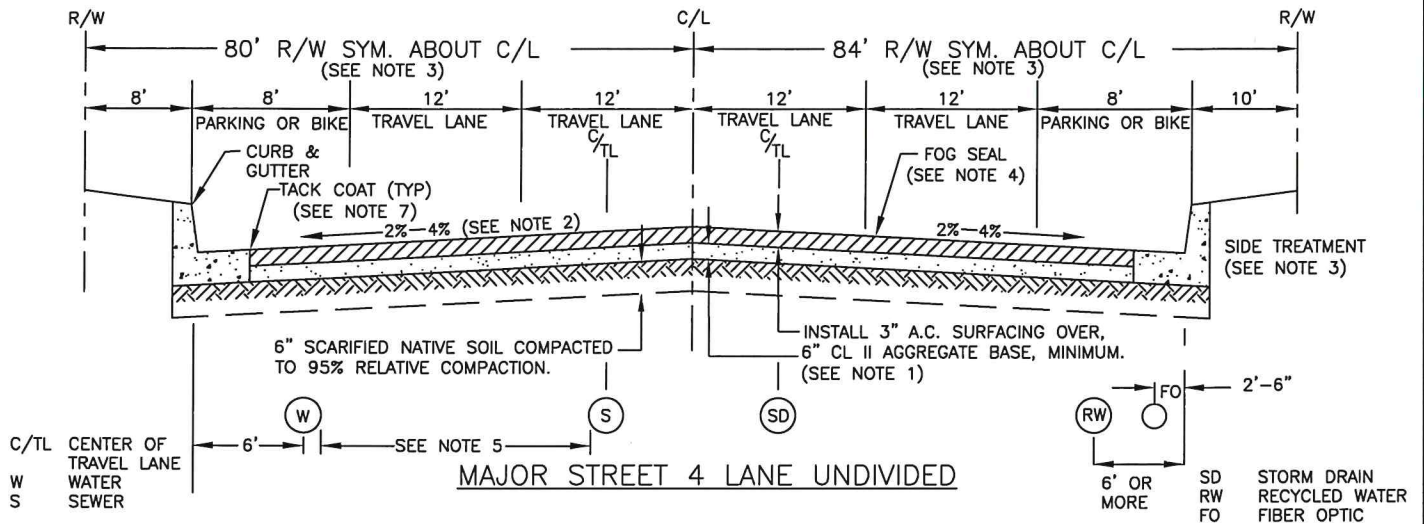
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PUD

DRAWN BY: JA

SHEET 1 OF 1





#### NOTES:

1. ROADWAY STRUCTURAL SECTIONS SHOWN ARE MINIMUMS. ACTUAL STRUCTURAL COMPONENT VALUES SHALL BE DETERMINED BY SOILS/TRAFFIC ANALYSES FOR "R" VALUE AND TRAFFIC INDEX (TI). IN NO CASE SHALL THE ACTUAL STRUCTURAL SECTION BE LESS THAN THE MINIMUMS SHOWN.
2. PAVEMENT CROSS-SLOPES ARE MINIMUM-MAXIMUM VALUES.
3. SIDEWALK PATTERNS AND R/W WIDTH WILL VARY WITH LOCATION. SEE STD. DRAWING ST-5 FOR "CONCRETE CURB & GUTTER AND SIDEWALK."
4. FOG SEAL SHALL BE APPLIED WHEN SPECIFIED.
5. ALL WET UTILITY SPACING MUST COMPLY WITH THE STATE WATERWORKS STANDARDS (CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 22, DIVISION 4, CHAPTER 16). SEE STANDARD SPECIFICATIONS AND STD DWG S-8, S-8A, AND S-9.
6. ADDITIONAL R/W MAY BE REQUIRED FOR BICYCLE LANES AND BUS TURNOUTS.
7. APPLY TACK COAT TO GUTTER PAN/MEDIAN CURB FACE PRIOR TO PAVING.
8. THE MEDIAN SHALL INCLUDE AREA FOR A STAMPED CONCRETE MAINTENANCE STRIP BUT ONLY BE INSTALLED IF SO DIRECTED BY THE CITY ENGINEER.



# CITY OF CLOVIS

## FOUR LANE MAJOR STREET SECTIONS AND UTILITY LOCATIONS

DWG NO.

**ST-3**

REF.: STD. SPECIFICATIONS  
SECTIONS 19, 26, 37,  
39, 73, APPENDIX

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

2020-12-10  
DATE: 15:33:40-08'00'

3

01-13-11

10-27-15

02-11-20

BGJ

CGV

CGV

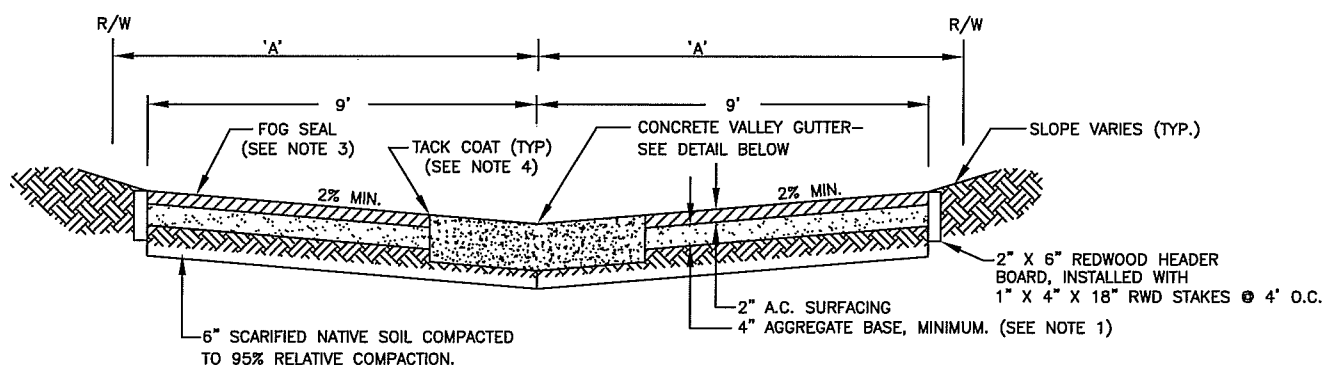
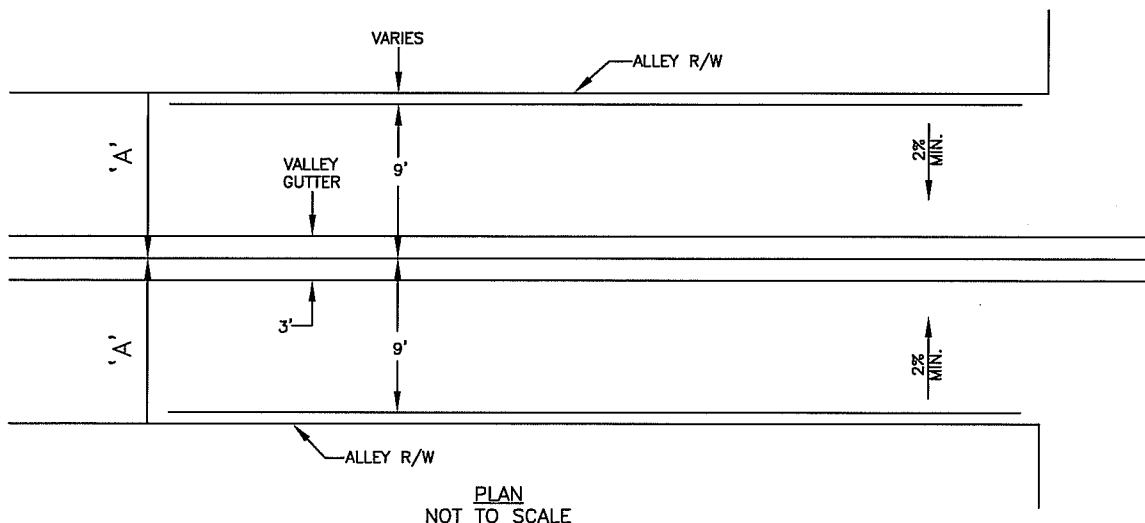
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DRU

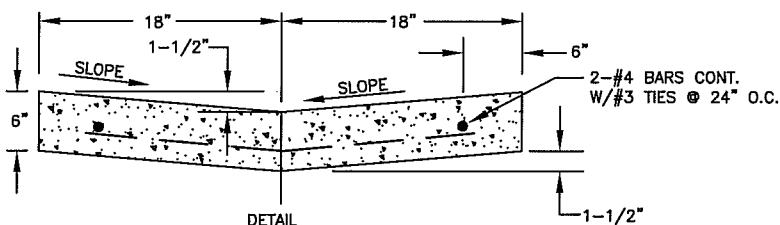
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DRAWN BY: JA

SHEET 1 OF 1



'A'	LAND USE
10'	RESIDENTIAL
13'	MULTIPLE UNITS
15'	COMMERCIAL



DETAIL

PROVIDE WEAKENED PLANE JOINTS AT 15' O.C. AND EXPANSION JOINTS AT 45' O.C. CONCRETE SHALL BE CLASS 1 OR 2 CONCRETE

#### NOTES:

1. ALLEY STRUCTURAL SECTION SHOWN IS MINIMUM. ACTUAL STRUCTURAL COMPONENT VALUES SHALL BE DETERMINED BY SOILS/TRAFFIC ANALYSES FOR "R" VALUE AND TRAFFIC INDEX (TI), BUT IN NO CASE SHALL BE LESS THAN MINIMUMS SHOWN.
2. PRIOR TO ALLEY CONSTRUCTION, ALL WATER METER VALVE BOXES, SEWER MANHOLES & CLEANOUTS, OTHER UTILITIES TO BE NOTED AND PROTECTED, THEN RAISED/LOWERED TO FINISH GRADE FOLLOWING PAVING.
3. FOG SEAL SHALL BE APPLIED WHEN SPECIFIED.
4. APPLY TACK COAT TO GUTTER PAN FACE PRIOR TO PAVING.



# CITY OF CLOVIS

## ALLEY

DWG NO.

### ST-4

REF.: STD. SPECIFICATIONS

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

12-29-11

BGJ

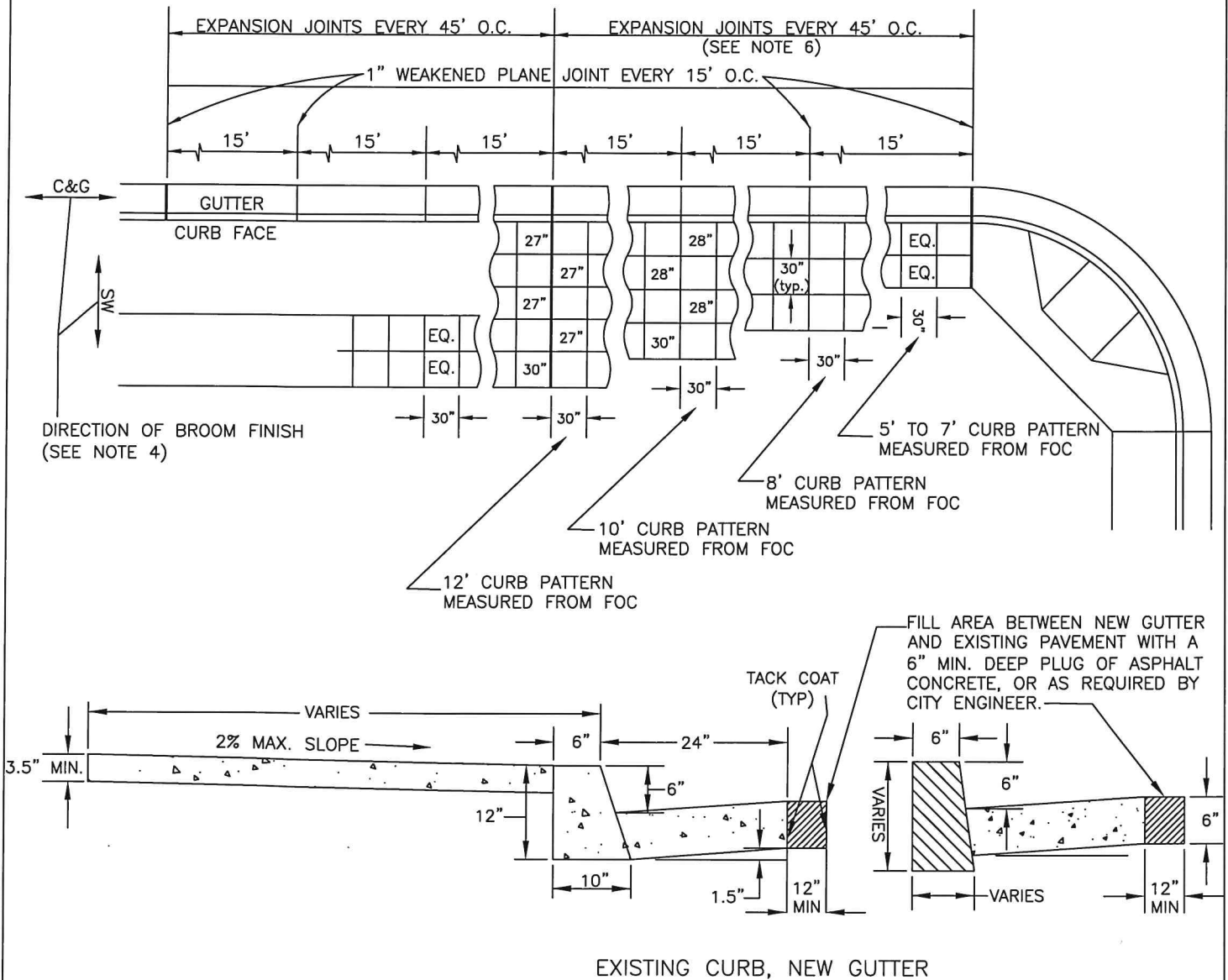
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DRAWN BY: JA

SHEET 1 OF 1



#### NOTES:

1. SIDEWALKS, CURBS AND GUTTERS TO BE CLASS 3 CONCRETE; EXTRUDED CURB SHALL BE CLASS 2.
2. APPLY TACK COAT TO GUTTER PAN FACE AND EXISTING AC PRIOR TO PAVING.
3. BROOM FINISH ON C&G AND SIDEWALK. MED. SWEAT FINISH ON SIDEWALK IS OPTIONAL OR AS DIRECTED BY THE ENGINEER.
4. BROOM FINISH SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL ON SIDEWALKS, AND PARALLEL TO THE PATH OF TRAVEL ON CURB & GUTTER.
5. CURB & GUTTER SUBGRADE, COMPACT TO 95%. SIDEWALK SUBGRADE, COMPACT TO 90%; BEHIND DRIVE APPROACH, 95%.
6. EXPANSION JOINT MATERIAL SHALL CONSIST OF 1/4" THICK PREMOLDED JOINT MATERIAL MEETING ASTM DESIGNATION D-1751.
7. ALL WORK CONSTRUCTED BY THIS STANDARD SHALL BE COMPLETED IN COMPLIANCE WITH CURRENT ADA REGULATIONS.
8. THE SIDEWALK SHALL PROVIDE A CONTINUOUS AND UNOBSTRUCTED PATH-OF-TRAVEL FOR PEDESTRIANS WITH DISABILITIES IN ACCORDANCE WITH CURRENT ADA STANDARDS.
9. FINISH OF CONCRETE SHOULD MATCH ADJACENT PRE-EXISTING CONCRETE.
10. ANY UTILITY BOXES THAT ENCROACH THE SIDEWALK SHALL BE BORDERED BY A 12" CONCRETE COLLAR A MINIMUM OF 3 1/2" THICK.
11. ALL SIDEWALK REPLACEMENTS OR REPAIRS SHALL INSTALL #4 DOWEL BARS, 12" IN LENGTH AND TIE-IN TO EXISTING CONCRETE IMPROVEMENTS AT 18" O.C. OR AS DIRECTED BY THE CITY ENGINEER.



# CITY OF CLOVIS

## CONCRETE CURB & GUTTER AND SIDEWALKS

DWG NO.

**ST-5**

REF.: STD. SPECIFICATIONS

APPROVED BY:

*[Signature]*

CITY ENGINEER

DATE: 4/5/21

NO.

REVISED

BY

APPROVALS

12-29-11

04-13-17

BGJ

CM

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PUD

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05-04-20

CGV

*[Signature]*

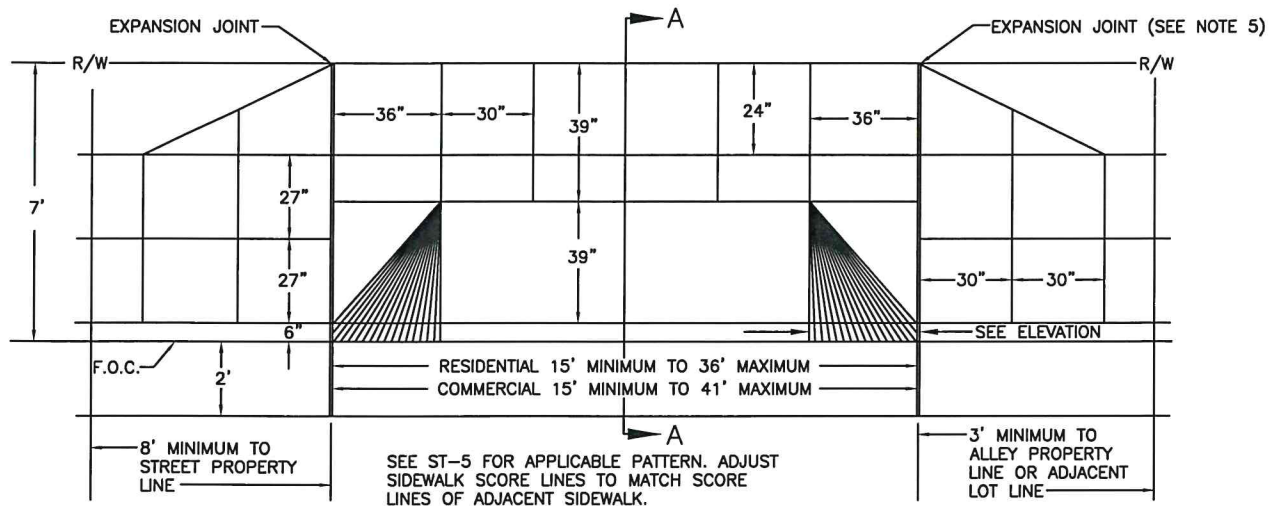
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*[Signature]*

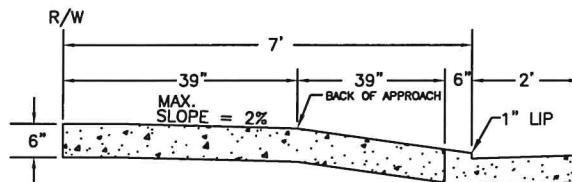
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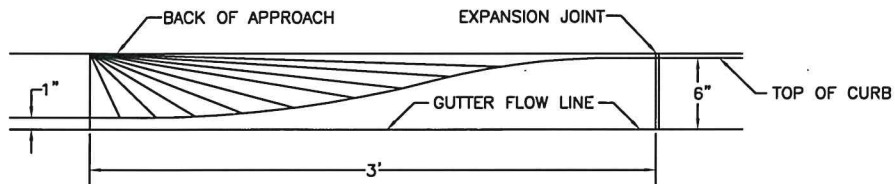
SHEET 1 OF 1



PLAN VIEW



SECTION A-A



ELEVATION

NOTES:

1. APPROACHES AND SIDEWALK SHALL BE CLASS 3 CONCRETE. THE APPROACH, SIDEWALK BEHIND APPROACH, AND CURB & GUTTER SUBGRADE SHALL BE COMPACTED TO 95%. OTHER SIDEWALK SUBGRADE SHALL BE COMPACTED TO 90%.
2. BROOM FINISH ON APPROACH AND ON SIDEWALK. MED. SWEAT FINISH ON SIDEWALK IS OPTIONAL OR AS DIRECTED BY THE ENGINEER. DEEP SCORE MARK IN CENTER OF APPROACH WHEN THROAT IS WIDER THAN 20'.
3. BROOM FINISH SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL ON SIDEWALKS, AND PARALLEL TO THE PATH OF TRAVEL ON CURB & GUTTER.
4. NOT MORE THAN 60% OF CURB FACE MAY BE USED FOR DRIVEWAY APPROACH OPENING.
5. EXPANSION JOINT MATERIAL SHALL CONSIST OF 1/4" PREMOLDED JOINT FILLER MEETING ASTM DESIGNATION D 1751.
6. ALL WORK CONSTRUCTED BY THIS STANDARD SHALL BE COMPLETED IN COMPLIANCE WITH CURRENT ADA REGULATIONS.



# CITY OF CLOVIS

DWG NO.

ST-6

## DRIVEWAY APPROACH 7' CURB PATTERN

REF.: STD. SPECIFICATIONS

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE: 15:28:30-08'00'

12-29-11

06-19-18

05-04-20

BGJ

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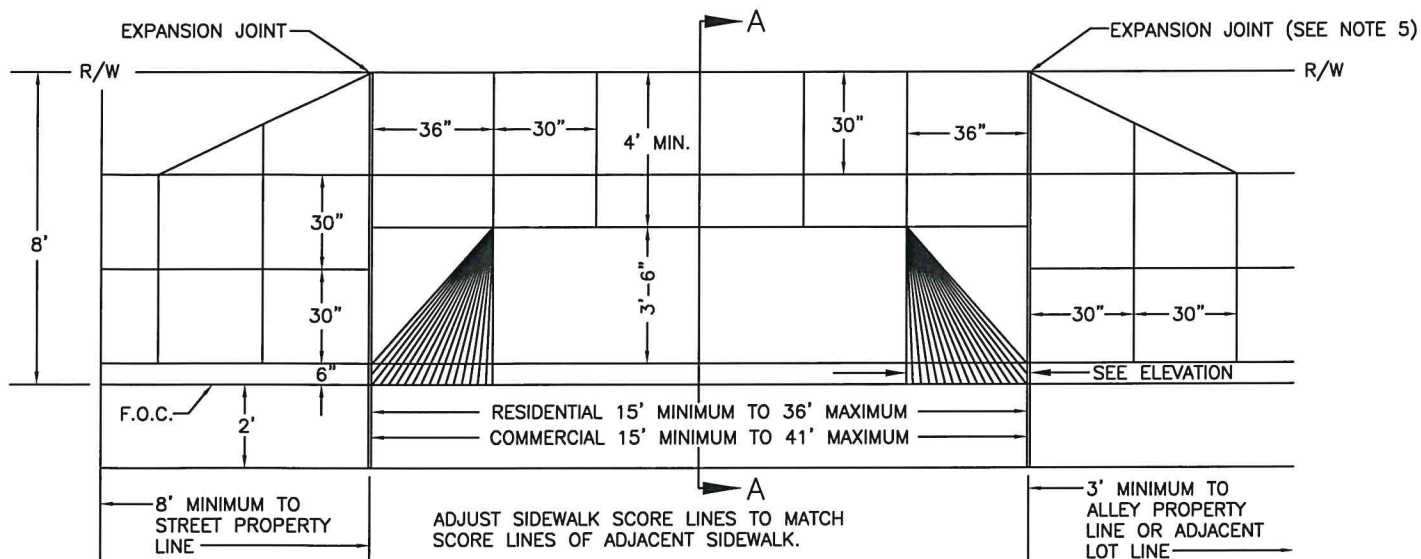
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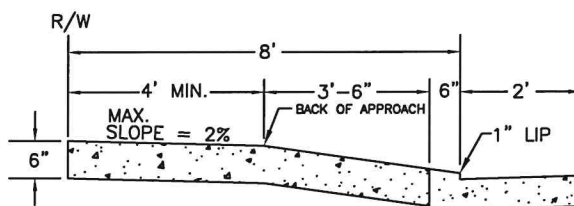
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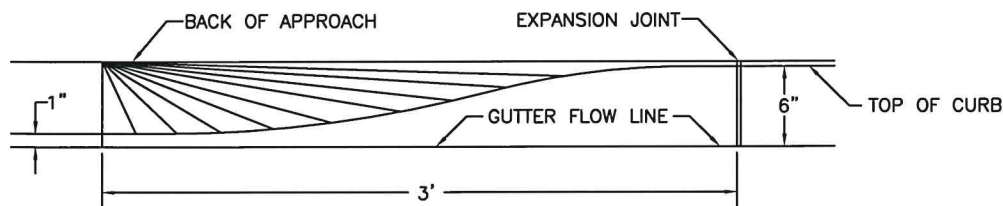




PLAN VIEW



SECTION A-A



ELEVATION

NOTES:

1. APPROACHES AND SIDEWALK SHALL BE CLASS 3 CONCRETE. THE APPROACH, SIDEWALK BEHIND APPROACH, AND CURB & GUTTER SUBGRADE SHALL BE COMPACTED TO 95%. OTHER SIDEWALK SUBGRADE SHALL BE COMPACTED TO 90%.
2. BROOM FINISH ON APPROACH AND ON SIDEWALK. MEDIUM SWEAT FINISH ON SIDEWALK IS OPTIONAL OR AS DIRECTED BY THE ENGINEER. DEEP SCORE MARK IN CENTER OF APPROACH WHEN THROAT IS WIDER THAN 20'.
3. BROOM FINISH SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL ON SIDEWALKS, AND PARALLEL TO THE PATH OF TRAVEL ON CURB & GUTTER.
4. NOT MORE THAN 60% OF CURB FACE MAY BE USED FOR DRIVEWAY APPROACH OPENING.
5. EXPANSION JOINT MATERIAL SHALL CONSIST OF 1/4" PREMOLDED JOINT FILLER MEETING ASTM DESIGNATION D 1751.
6. ALL WORK CONSTRUCTED BY THIS STANDARD SHALL BE COMPLETED IN COMPLIANCE WITH CURRENT ADA REGULATIONS.



# CITY OF CLOVIS

DWG NO.

ST-7

## DRIVEWAY APPROACH 8' CURB PATTERN

REF.: STD. SPECIFICATIONS

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

2020.12.10

DATE: 15:28:52-08'00'

12-29-11

05-29-12

05-04-20

BGJ

PAA

CGV

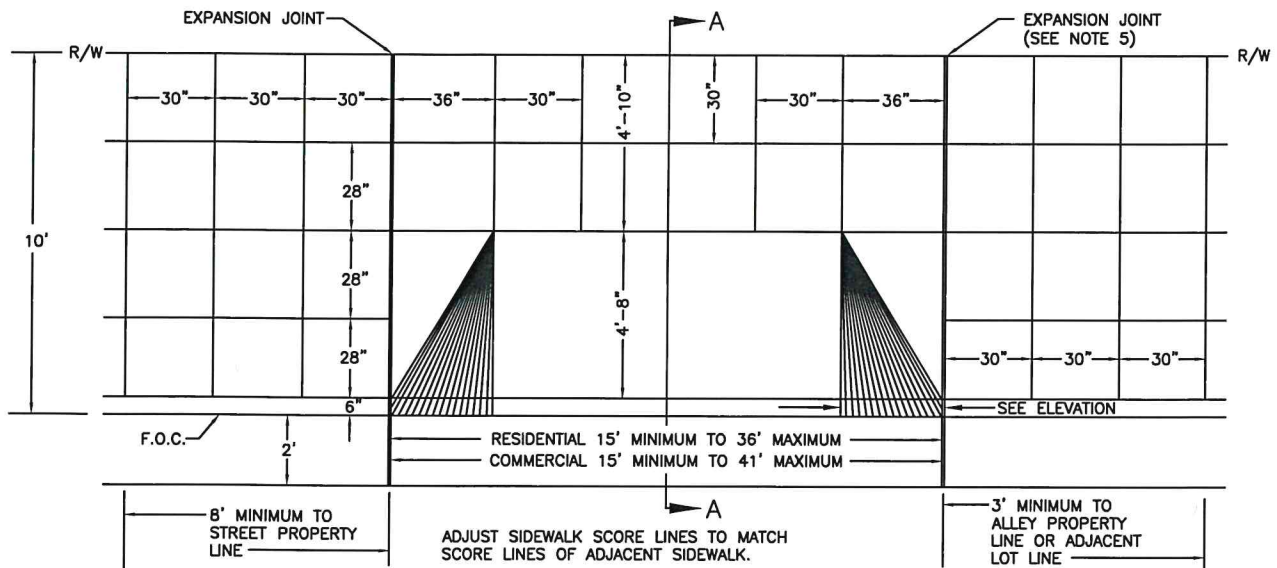
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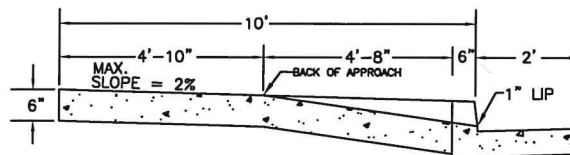
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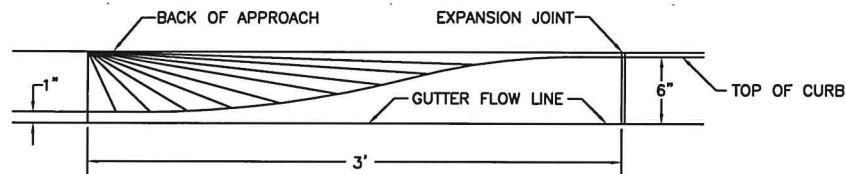
SHEET 1 OF 1



PLAN VIEW



SECTION A-A



ELEVATION

**NOTES:**

1. APPROACHES AND SIDEWALK SHALL BE CLASS 3 CONCRETE. THE APPROACH, SIDEWALK BEHIND APPROACH, AND CURB & GUTTER SUBGRADE SHALL BE COMPACTED TO 95%. OTHER SIDEWALK SUBGRADE SHALL BE COMPACTED TO 90%.
2. BROOM FINISH ON APPROACH AND ON SIDEWALK. MEDIUM SWEAT FINISH ON SIDEWALK IS OPTIONAL OR AS DIRECTED BY THE ENGINEER. DEEP SCORE MARK IN CENTER OF APPROACH WHEN THROAT IS WIDER THAN 20'.
3. BROOM FINISH SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL ON SIDEWALKS, AND PARALLEL TO THE PATH OF TRAVEL ON CURB & GUTTER.
4. NOT MORE THAN 60% OF CURB FACE MAY BE USED FOR DRIVEWAY APPROACH OPENING.
5. EXPANSION JOINT MATERIAL SHALL CONSIST OF 1/4" PREMOLDED JOINT FILLER MEETING ASTM DESIGNATION D 1751.
6. ALL WORK CONSTRUCTED BY THIS STANDARD SHALL BE COMPLETED IN COMPLIANCE WITH CURRENT ADA REGULATIONS.



# CITY OF CLOVIS

DWG NO.

**ST-8**

## DRIVEWAY APPROACH 10' CURB PATTERN

REF.: STD. SPECIFICATIONS

APPROVED BY:

CITY ENGINEER

DATE: 2020.12.10  
15:26:00-08'00'

NO.

REVISED

BY

APPROVALS

SCALE: NTS

12-29-11

05-04-20

BGJ

CGV

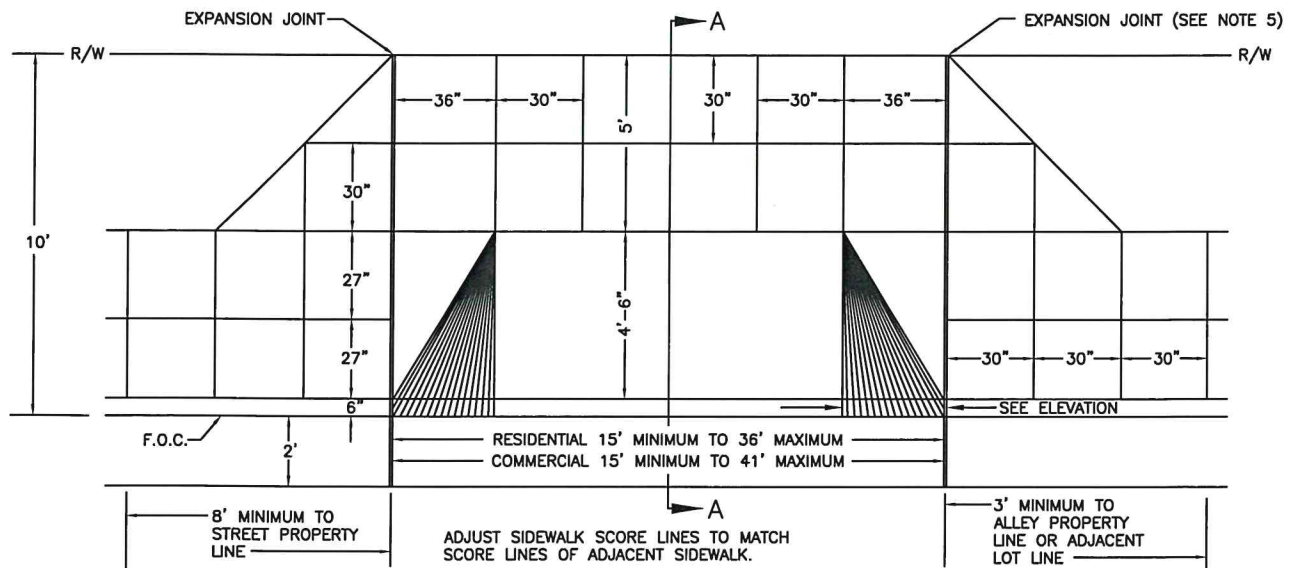
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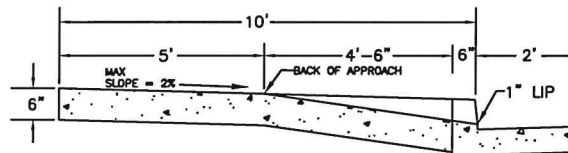
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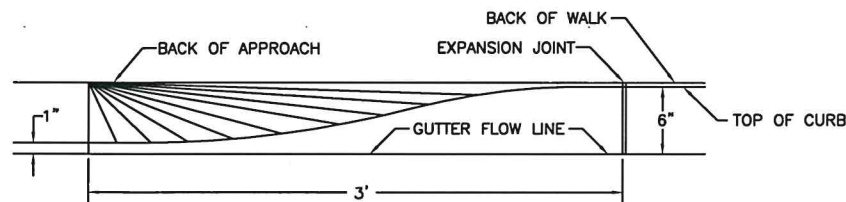
SHEET 1 OF 1



PLAN VIEW



SECTION A-A



ELEVATION

NOTES:

1. APPROACHES AND SIDEWALK SHALL BE CLASS 3 CONCRETE. THE APPROACH, SIDEWALK BEHIND APPROACH, AND CURB & GUTTER SUBGRADE SHALL BE COMPACTED TO 95%. OTHER SIDEWALK SUBGRADE SHALL BE COMPACTED TO 90%.
2. BROOM FINISH ON APPROACH AND ON SIDEWALK. MEDIUM SWEAT FINISH ON SIDEWALK IS OPTIONAL OR AS DIRECTED BY THE ENGINEER. DEEP SCORE MARK IN CENTER OF APPROACH WHEN THROAT IS WIDER THAN 20'.
3. BROOM FINISH SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL ON SIDEWALKS, AND PARALLEL TO THE PATH OF TRAVEL ON CURB & GUTTER.
4. NOT MORE THAN 60% OF CURB FACE MAY BE USED FOR DRIVEWAY APPROACH OPENING.
5. EXPANSION JOINT MATERIAL SHALL CONSIST OF 1/4" PREMOLDED JOINT FILLER MEETING ASTM DESIGNATION D 1751.
6. ALL WORK CONSTRUCTED BY THIS STANDARD SHALL BE COMPLETED IN COMPLIANCE WITH CURRENT ADA REGULATIONS.



# CITY OF CLOVIS

DWG NO.

ST-8A

## DRIVEWAY APPROACH ALT. 10' CURB PATTERN

REF.: STD. SPECIFICATIONS

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

2020.12.10

DATE: 15:29:54-08'00'

12-29-11

11-20-12

05-04-20

BGJ

BGJ

CGV

CM

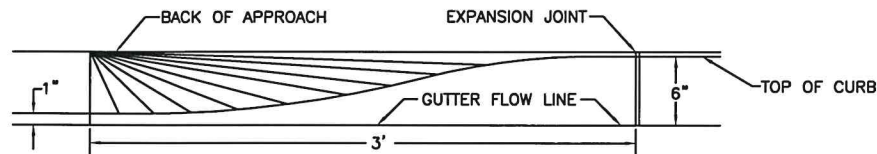
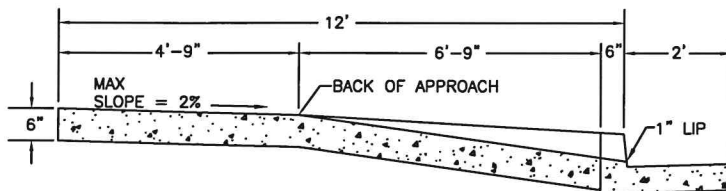
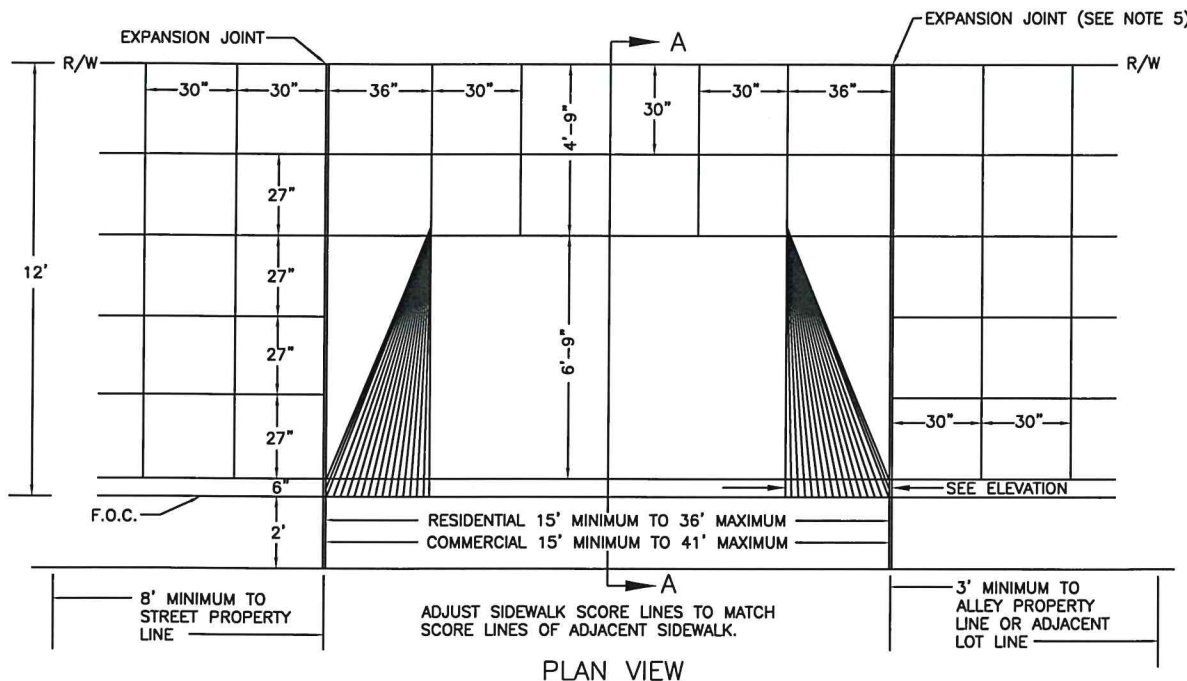
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SHEET 1 OF 1





#### NOTES:

1. APPROACHES AND SIDEWALK SHALL BE CLASS 3 CONCRETE. THE APPROACH, SIDEWALK BEHIND APPROACH, AND CURB & GUTTER SUBGRADE SHALL BE COMPACTED TO 95%. OTHER SIDEWALK SUBGRADE SHALL BE COMPACTED TO 90%.
2. BROOM FINISH ON APPROACH AND ON SIDEWALK. MEDIUM SWEAT FINISH ON SIDEWALK IS OPTIONAL OR AS DIRECTED BY THE ENGINEER. DEEP SCORE MARK IN CENTER OF APPROACH WHEN THROAT IS WIDER THAN 20'.
3. BROOM FINISH SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL ON SIDEWALKS, AND PARALLEL TO THE PATH OF TRAVEL ON CURB & GUTTER.
4. NOT MORE THAN 60% OF CURB FACE MAY BE USED FOR DRIVEWAY APPROACH OPENING.
5. EXPANSION JOINT MATERIAL SHALL CONSIST OF 1/4" PREMOLDED JOINT FILLER MEETING ASTM DESIGNATION D 1751.
6. ALL WORK CONSTRUCTED BY THIS STANDARD SHALL BE COMPLETED IN COMPLIANCE WITH CURRENT ADA REGULATIONS.



# CITY OF CLOVIS

## DRIVEWAY APPROACH 12' CURB PATTERN

DWG NO.

ST-9

REF.: STD. SPECIFICATIONS

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE: 15:31:23-08'00'

12-29-11

11-20-12

05-04-20

BGJ

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CGV

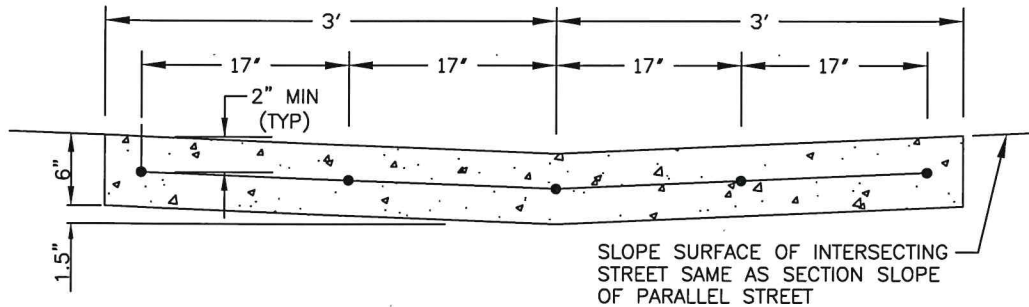
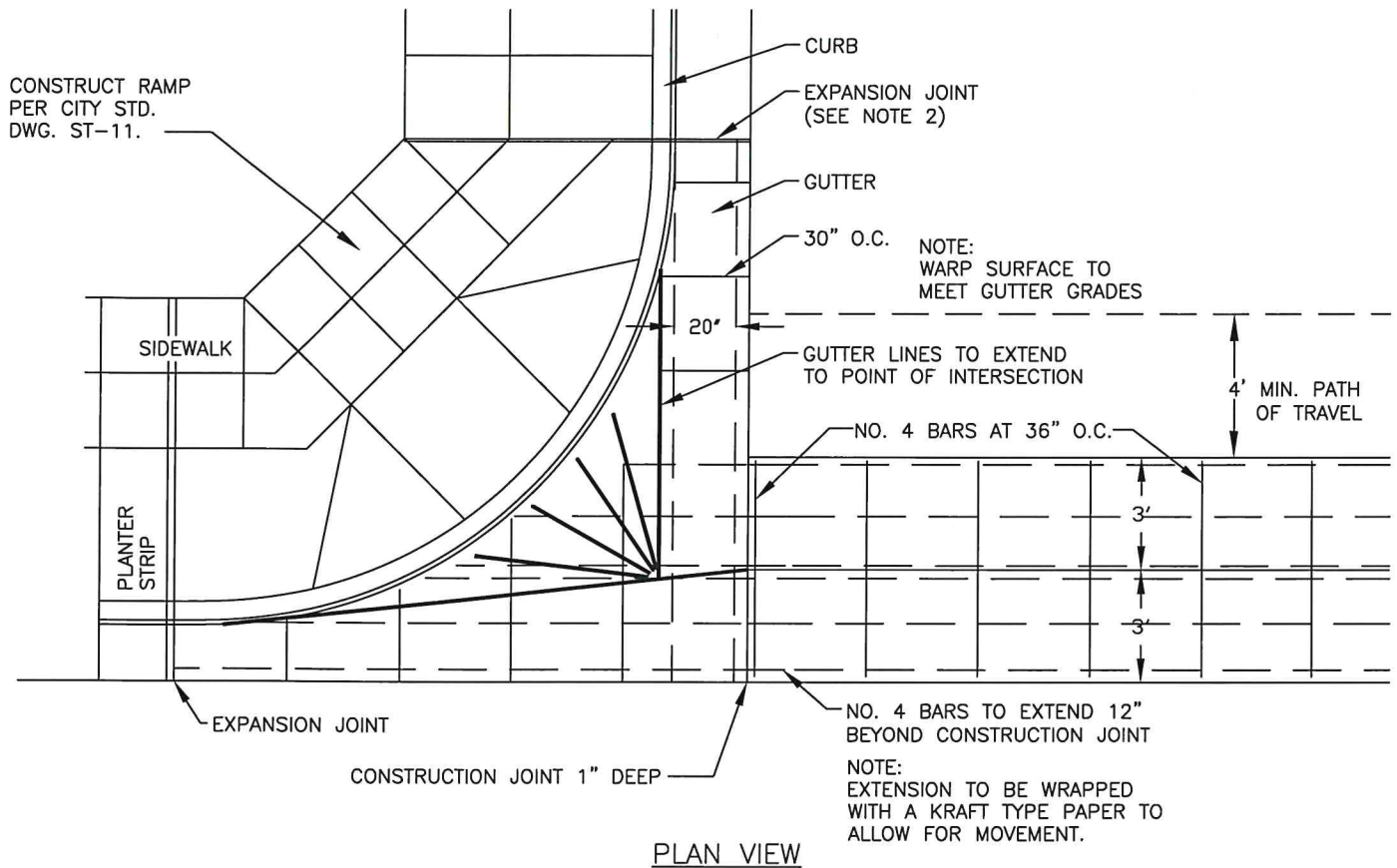
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DRAWN BY: JA

SHEET 1 OF 1



SECTION

NOTES:

1. CURB RETURN, GUTTER AND VALLEY GUTTER TO BE POURED MONOLITHICALLY.
2. EXPANSION JOINT MATERIAL SHALL BE 1/4" THICK PREMOLDED JOINT FILLER CONFORMING TO REQUIREMENTS OF ASTM DESIGNATION D 1751.
3. SURFACE SHALL BE ROUGH BROOM FINISH.
4. CONCRETE SHALL BE CLASS I OR 2.
5. VALLEY GUTTER SUBGRADE SHALL BE COMPACTED TO 95%.



# CITY OF CLOVIS

## CONCRETE VALLEY GUTTER

DWG NO.  
**ST-10**

REF.:  
STD. SPECIFICATIONS

APPROVED BY:

CITY ENGINEER

DATE: 15:34:03-08'00'

NO.

REVISED

BY

APPROVALS

SCALE: NTS

05-29-12

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CGV

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2

05-04-20

CGV

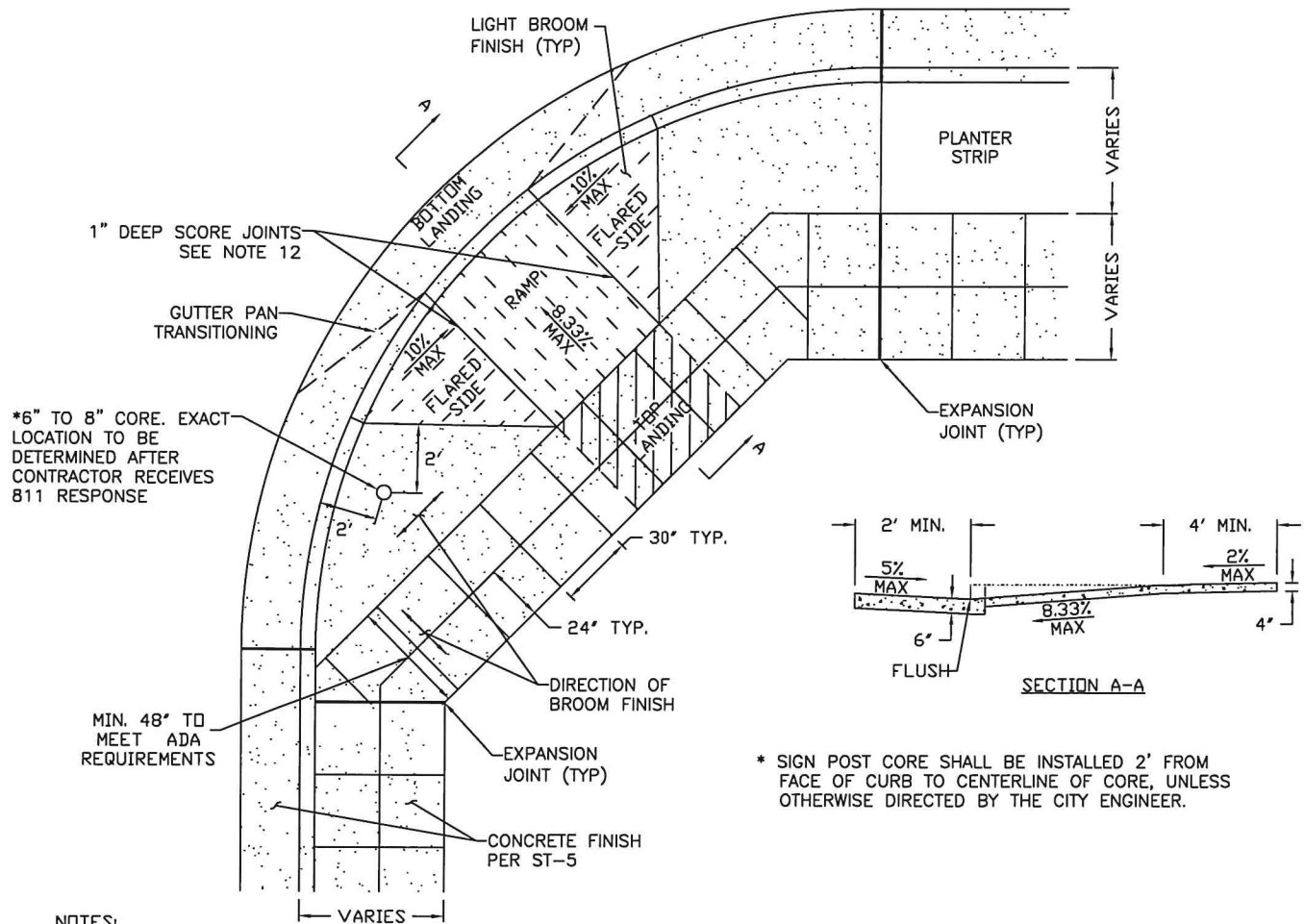
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DRAWN BY: JA

SHEET 1 OF 1



#### NOTES:

1. FOR RETURNS WITH 25' OR LARGER RADII, IT IS PREFERRED TO CONSTRUCT TWO CURB RAMPS WITHIN THE RETURN. EACH RAMP SHOULD BE GENERALLY ALIGNED WITH THE PEDESTRIAN PATH-OF-TRAVEL. IF ONLY A SINGLE CURB RAMP CAN BE CONSTRUCTED WITHIN THE RETURN, THEN THE CURB RAMP SHALL BE LOCATED AT THE MIDPOINT OF THE CURB RETURN, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. AN ACCESSIBLE ROUTE SHALL CONNECT THE CURB RAMP TO ACCESSIBLE FACILITIES AND ELEMENTS, SUCH AS SIDEWALKS AND PEDESTRIAN PUSH BUTTONS.
3. RAMP WIDTH SHALL BE 5 FEET WIDE AND CONSTRUCTED IN ACCORDANCE WITH CURRENT ADA STANDARDS.
4. THE SURFACE OF THE RAMP, ITS FLARED SIDES, AND ADJACENT ACCESSIBLE ROUTE SHALL BE FREE OF ABRUPT CHANGES.
5. FINISHED SURFACE OF THE CURB RAMP SHALL BE STABLE, FIRM, SLIP RESISTANT AND OF CONTRASTING FINISH FROM THAT OF THE ADJACENT SIDEWALK.
6. TOP LANDING:
  - 6.a. A 4 FEET DEEP LANDING SHALL BE PROVIDED AT THE UPPER END OF THE RAMP OVER THE FULL WIDTH OF THE RAMP.
  - 6.b. THE LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.
7. BOTTOM LANDING:
  - 7.a. THE LANDING SHALL EXTEND A MINIMUM OF 2' FROM THE BOTTOM OF THE RAMP BY THE FULL WIDTH OF THE RAMP.
  - 7.b. TRANSITION FROM RAMP TO LANDING SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
  - 7.c. MAXIMUM SLOPE OF THE LANDING SHALL NOT EXCEED 5%. TRANSITIONING OF GUTTER PAN SHALL OCCUR OUTSIDE OF THE LANDING.
  - 7.d. WHERE MARKED, THE LANDING SHALL TERMINATE WITHIN THE INSIDE EDGE OF THE CROSS-WALK STRIPE.
8. DETECTABLE WARNING SHALL BE SURFACED APPLIED PANELS INSTALLED IN ACCORDANCE WITH CURRENT ADA STANDARDS.
9. CURB RAMPS WITH RETURNED CURBS OR OTHER WELL-DEFINED EDGES, SUCH EDGES SHALL BE PARALLEL TO THE DIRECTION OF PEDESTRIAN FLOW.
10. SIGNAGE SHALL BE INSTALLED IN ACCORDANCE WITH CURRENT ADA STANDARDS.
11. ALL WORK CONSTRUCTED BY THIS STANDARD SHALL BE IN COMPLIANCE WITH CURRENT ADA REGULATIONS.
12. FOR A MONOLITHIC POUR, DEEP SCORE JOINTS SHOULD BE EXTENDED TO LIP OF GUTTER.



# CITY OF CLOVIS

## STANDARD CURB RETURN RAMP

DWG NO.  
**ST-11**

REF.: CURRENT ADA STANDARDS

APPROVED BY:

CITY ENGINEER

DATE:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

2021.01.11  
15:40:34-08'00"

05-29-12

03-20-19

08-31-20

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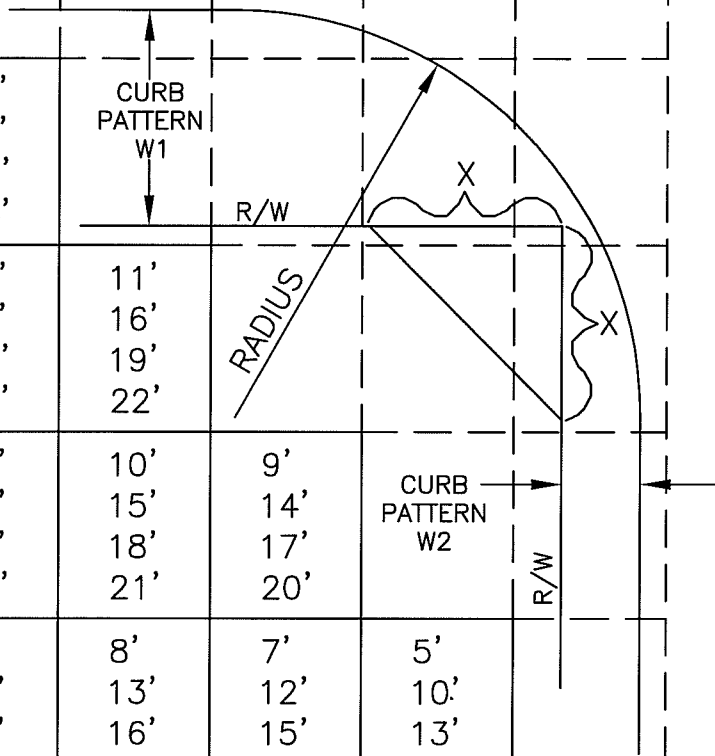
DRAWN BY: BGJ

SHEET 1 OF 1

PROPERTY CORNER CUTOFFS REQUIRED TO ACCOMODATE RAMPS AT CURB RETURNS.

ALL RETURNS ASSUMED TO BE 90°. FORMULA:  $X = \frac{R(\sec 45 - 1) + 12.5}{\sin 45} - (W1 + W2)$

CURB PATTERN(W)	RADIUS	5'	6'	7'	8'	10'	12'
5'	12' 20' 25' 30'	15' 20' 23' 26'					
6'	12' 20' 25' 30'	14' 19' 22' 25'	13' 18' 21' 24'				
7'	12' 20' 25' 30'	13' 18' 21' 24'	12' 17' 20' 23'	11' 16' 19' 22'			
8'	12' 20' 25' 30'	12' 17' 20' 23'	11' 16' 19' 22'	10' 15' 18' 21'	9' 14' 17' 20'		
10'	12' 20' 25' 30'	10' 15' 18' 21'	9' 14' 17' 20'	8' 13' 16' 19'	7' 12' 15' 18'	5' 10' 13' 16'	
12'	12' 20' 25' 30'	8' 13' 16' 19'	7' 12' 15' 18'	6' 11' 14' 17'	5' 10' 13' 16'	3' 8' 11' 14'	— 6' 9' 12'
16'	12' 20' 25' 30'	4' 9' 12' 15'	3' 8' 11' 14'	2' 7' 10' 13'	1' 6' 9' 12'	— 4' 7' 10'	— 2' 5' 8'



ALL FIGURES ROUNDED UP TO THE NEAREST FOOT.



# CITY OF CLOVIS

## CORNER CUTOFF COMPUTATIONS

DWG NO.

ST-12

REF.:

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

01-13-11

02-16-11

BGJ

BGJ

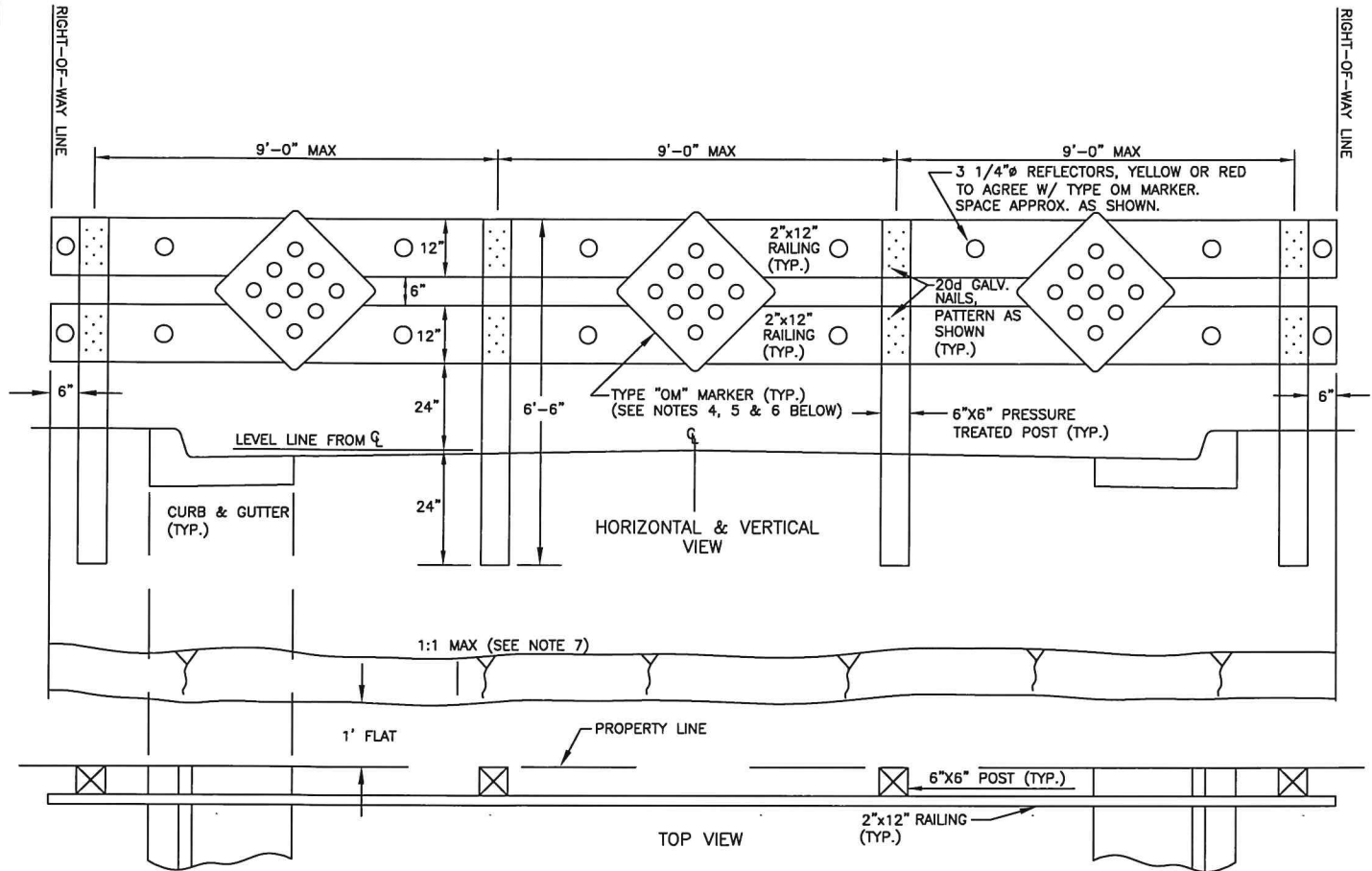
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DRAWN BY: BGJ

SHEET 1 OF 1



#### NOTES:

1. TIMBER: POSTS — PRESSURE TREATED HEM FIR.  
RAILING — HEM FIR.
2. PAINT: TWO COATS OF 100% ACRYLIC "SCHOOL BUS" YELLOW PAINT SHALL BE APPLIED TO ALL WOOD SURFACES.
3. BARRICADE MUST BE INSTALLED FULL WIDTH OF RIGHT-OF-WAY. ADD SECTIONS AS NECESSARY.
4. TYPE OM1-1 YELLOW MARKER USED TO WARN OF UNIMPROVED CONDITIONS AHEAD.
5. TYPE OM4-1 RED MARKER USED TO MARK THE END OF A STREET.
6. TYPE OM MARKERS TO CONFORM CAL MUTCD SPECIFICATIONS.
7. FOR DIFFERENCE IN ELEVATION GREATER THAN 6" BETWEEN FRONT AND REAR OF BARRICADE, GRADE AS SHOWN.
8. WHERE RETAINING WALL IS LOCATED ADJACENT TO BARRICADE, BARRICADE SHALL BE SEPARATED FROM WALL AND NOT INSTALLED AS PART OF THE WALL.



# CITY OF CLOVIS

## TEMPORARY TIMBER BARRICADE

DWG NO.  
**ST-13**

REF.: STD. SPECIFICATIONS

APPROVED BY:

CITY ENGINEER

DATE: 4/5/21

NO.

REVISED

BY

APPROVALS

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05-29-12

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08-13-20

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SCALE: NTS

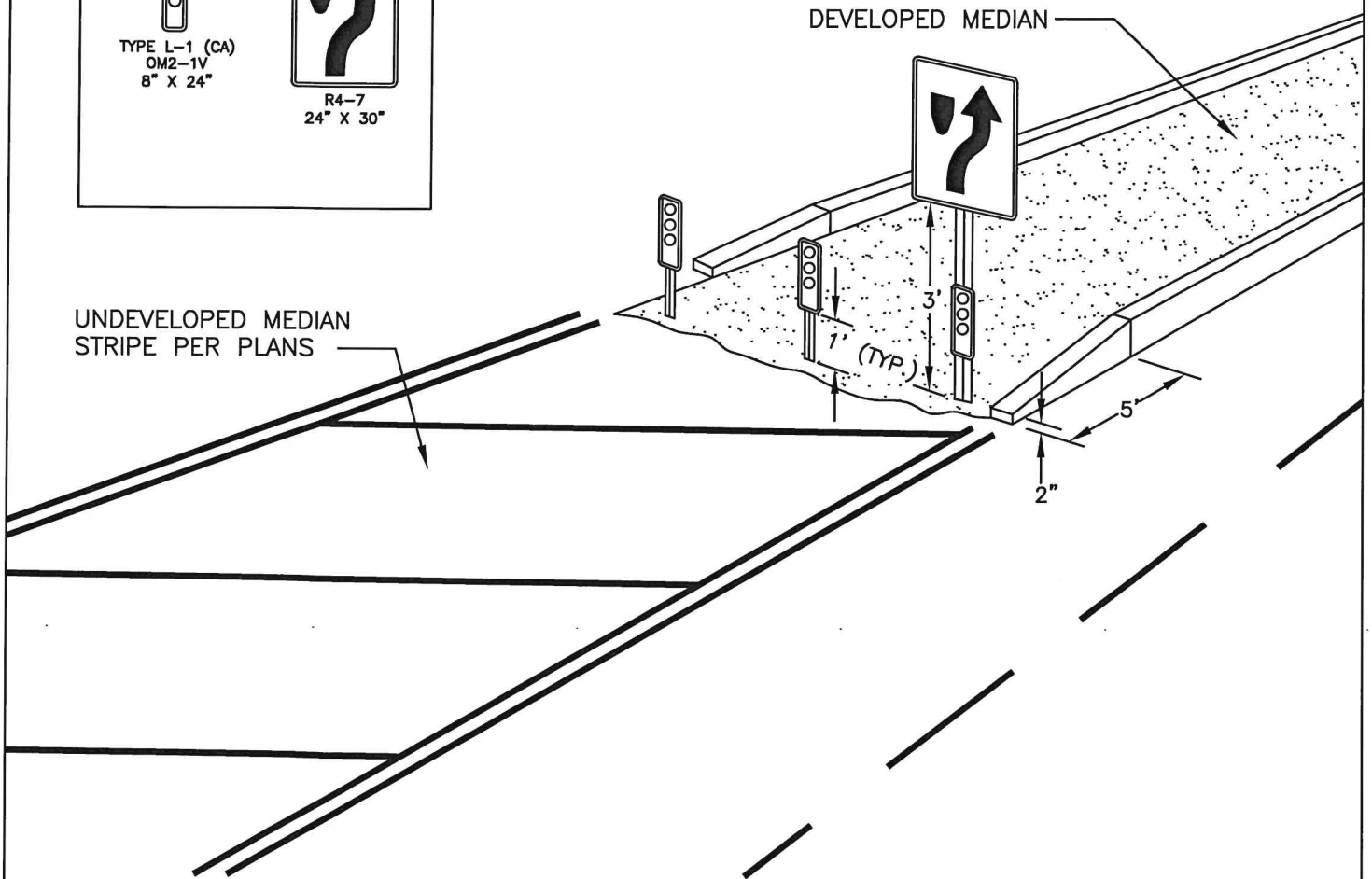
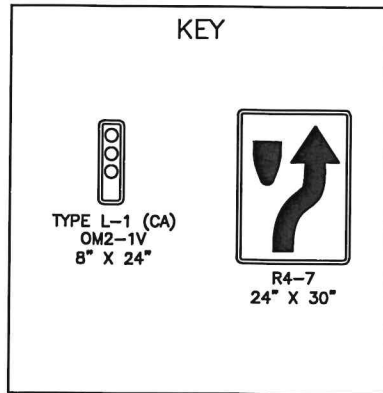
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SHEET 1 OF 1



**NOTE:**

SIGN POSTS SHALL BE 2" X 2" X 12 GAUGE  
SQUARE GALVANIZED STEEL, PERFORATED.



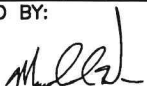
# CITY OF CLOVIS

## MEDIAN TRANSITION STANDARD

DWG NO.  
**ST-14**

REF.:  
STD. SPECIFICATIONS  
SECTION 84

APPROVED BY:



CITY ENGINEER

DATE: 4/5/21

NO.

REVISED

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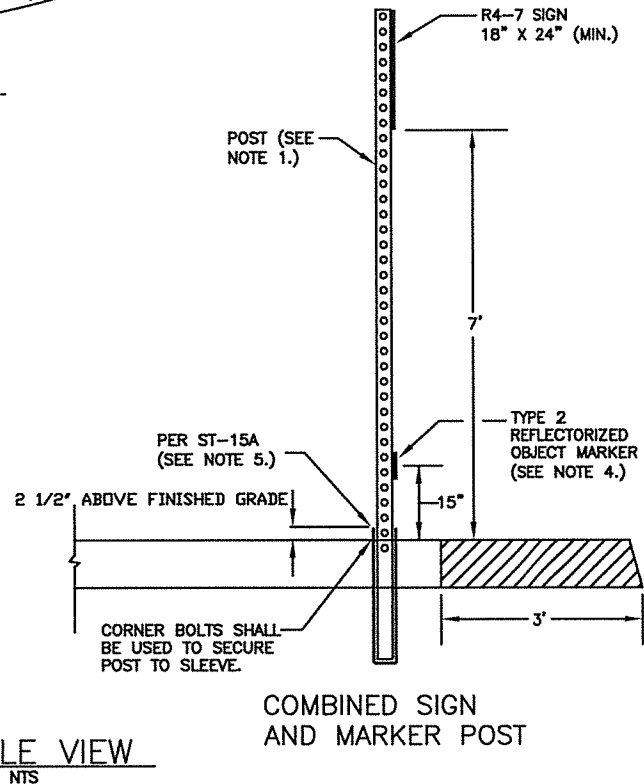
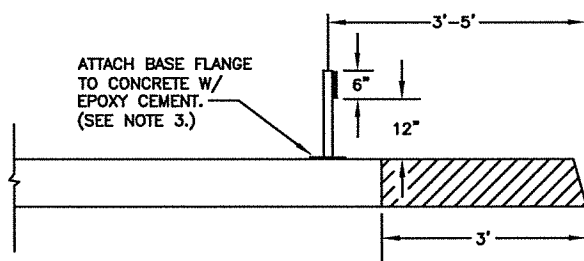
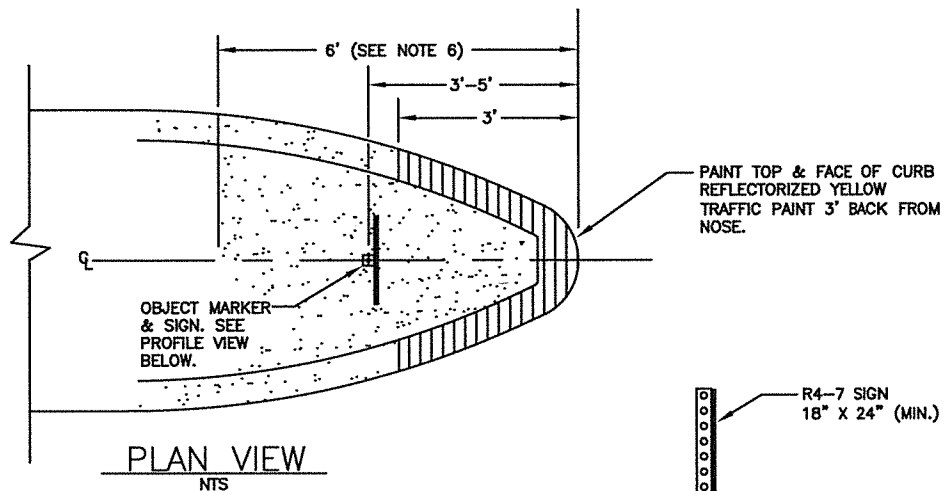
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SCALE: NTS

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SHEET 1 OF 1



### NOTES:

1. POSTS FOR COMBINED STREET SIGN AND OBJECT MARKER SHALL BE 12 GAUGE 2" X 2" SQUARE, GALVANIZED AND PERFORATED.
2. FOR POSTS TO BE USED IN COMBINATION WITH PEDESTRIAN PUSH BUTTON POLES, REFER TO TRAFFIC SIGNAL STD. DRAWINGS NO. TS-7 & TS-7A.
3. POST AND FLANGE FOR TYPE 2 (OM2-1H) OBJECT MARKER SHALL BE SCHED. 80 PVC, 2-1/4" O.D. MIN.
4. OBJECT MARKER SHALL BE TYPE 2, REFLECTORIZED (YELLOW REFLECTORS) CONFORMING TO CAL MUTCD OM2-1H.
5. ANCHOR SHALL BE 30" "ANCHOR-MATE W/ 12" SLEEVE", ULTIMATE HIGHWAY PRODUCTS, INC. OR APPROVED EQUAL. SEE STD. DRAWING NO. ST-15A. ANCHOR TO BE INSTALLED NO MORE THAN 2 1/2" ABOVE GRADE.
6. INSTALL 3" THICK CLASS 3 CONCRETE CAP MINIMUM 6' FROM NOSE. CERTAIN LOCATIONS MAY REQUIRE STAMPED CONCRETE.



# CITY OF CLOVIS

## MEDIAN ISLAND NOSE MARKER & SIGN

DWG NO.

ST-15

REF.:  
STD. SPECIFICATIONS

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE: 6/6/19

01-14-11

05-29-12

09-28-12

03-20-19

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DRAWN BY: JA

SHEET 1 OF 1

ANCHOR TO BE  
INSTALLED NO MORE  
THAN 2½" ABOVE  
GRADE

2-1/2" X 2-1/2"  
X 12 GA. @ 12"  
LONG SLEEVE

FILLET WELD  
ALL AROUND

2-1/4" X 2-1/4"  
X 12 GA. @ 30"  
LONG STEEL TUBE

TWO CORNER BOLTS  
SHALL BE USED TO  
SECURE POST TO  
SLEEVE

Ø7/16" HOLES  
(4 SIDES)

FILLET WELD  
ALL AROUND

**NOTE:**

POST ANCHOR SHALL BE 30"  
ANCHOR-MATE W/12" SLEEVE,  
ULTIMATE HIGHWAY PRODUCTS,  
INC. OR APPROVED EQUAL.

EXPLODED VIEW

SIDE VIEW

**NOTES:**



1. ANY HOLES BELOW TOP TWO HOLES SHALL BE COVERED WITH DUCT TAPE.
2. SECURE POST TO ANCHOR USING CORNER BOLT, SAMPLE PICTURED TO LEFT.



**CITY OF CLOVIS**

DWG NO.

**ST-15A**

**STREET SIGN POST ANCHOR**

REF.:  
STD. SPECIFICATIONS  
SECTION 84

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER *[Signature]*

DATE: 6/6/19

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09-28-12

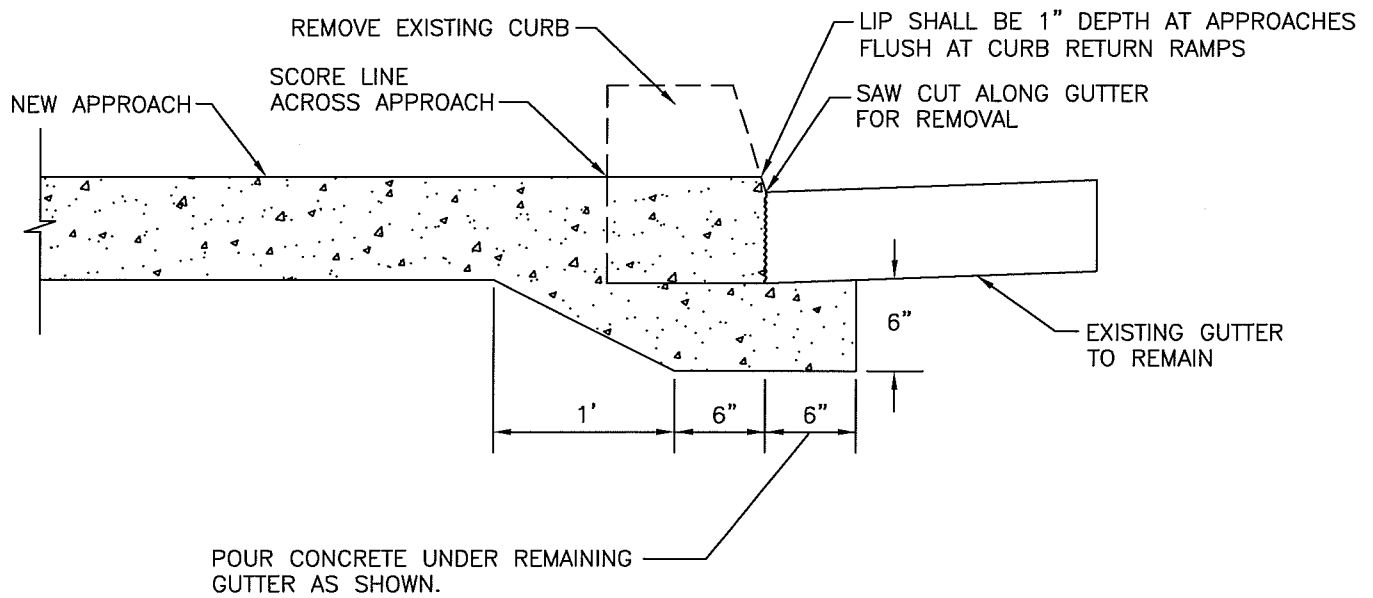
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SHEET 1 OF 1



# CITY OF CLOVIS

DWG NO.  
**ST-16**

## EXISTING CURB REMOVAL FOR NEW APPROACHES/CURB RETURN RAMPS

REF.:  
STD. SPECIFICATIONS  
SECTION 73

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

05-15-09

01-13-11

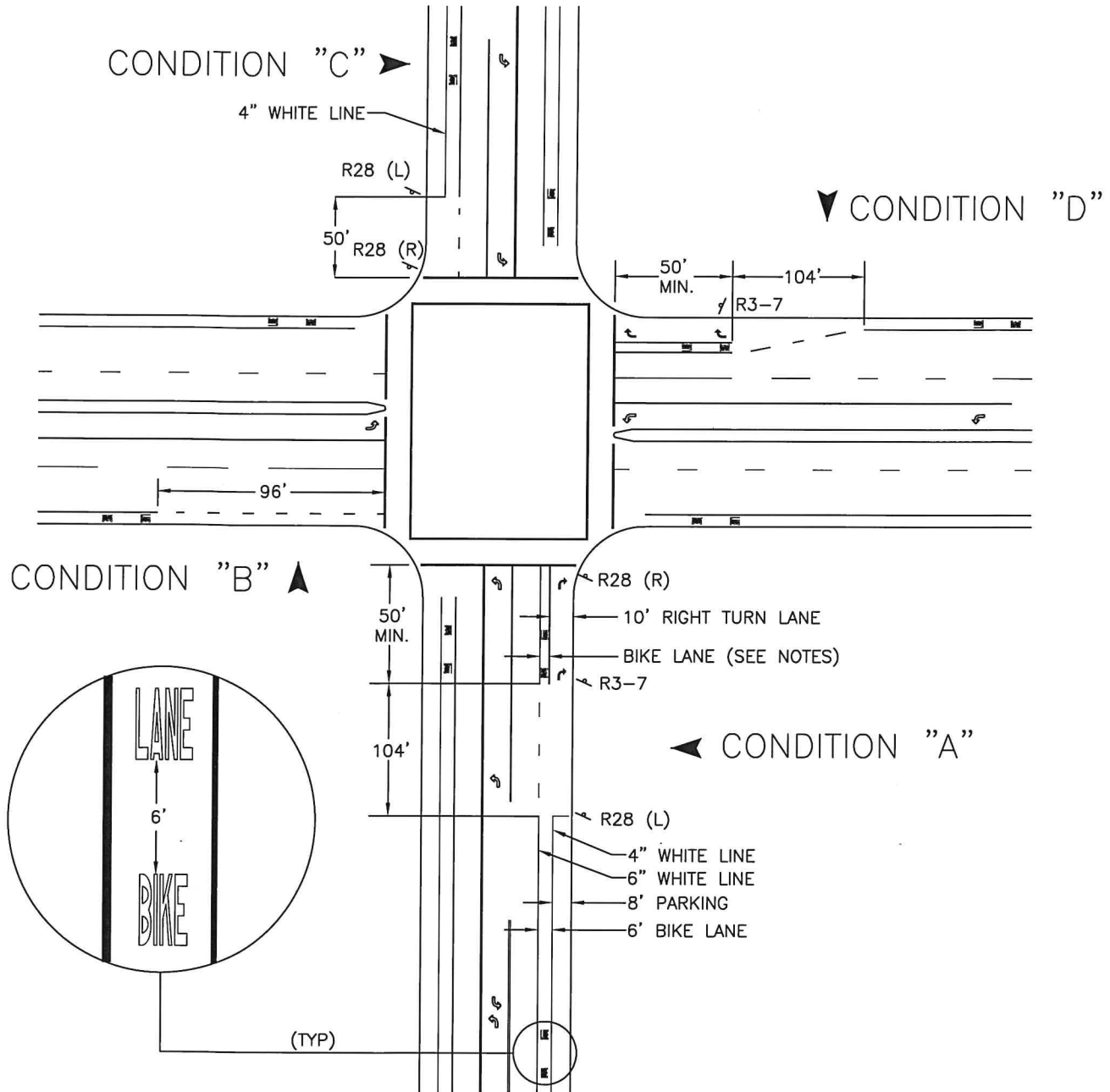
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DRU  
PUD

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SHEET 1 OF 1



NOTES:

CONDITION "A" = 6' BIKE LANE WITH 8' PARKING TRANSITIONS TO 10' RIGHT TURN LANE AND 4' BIKE LANE (40 MPH AND UNDER) OR 6' BIKE LANE (45 MPH AND OVER).

CONDITION "B" = 5' BIKE LANE WITH NO RIGHT TURN LANE

CONDITION "C" = 8' PARKING AND 6' BIKE LANE EXTENDED TO INTERSECTION

CONDITION "D" = 5' BIKE LANE TRANSITIONS TO RIGHT TURN LANE



# CITY OF CLOVIS

DWG NO.

ST-17

## INTERSECTION BIKE LANE STRIPING

REF.: STD. SPECIFICATIONS  
SECTION 84

APPROVED BY:

*M. L. L.*

CITY ENGINEER

DATE: 4/5/21

NO.

REVISED

BY

APPROVALS

SCALE: NTS

06-19-09

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DRAWN BY: JA

SHEET 1 OF 1

CENTER AND LANELINE STRIPING SHALL BE SOLID FOR 50' APPROACHING INTERSECTION SECTION EXCEPT WHERE STRIPED THROUGH INTERSECTION.

STRIPING OPPOSITE T-INTERSECTING STREET TO BE STRIPED THROUGH INTERSECTION.

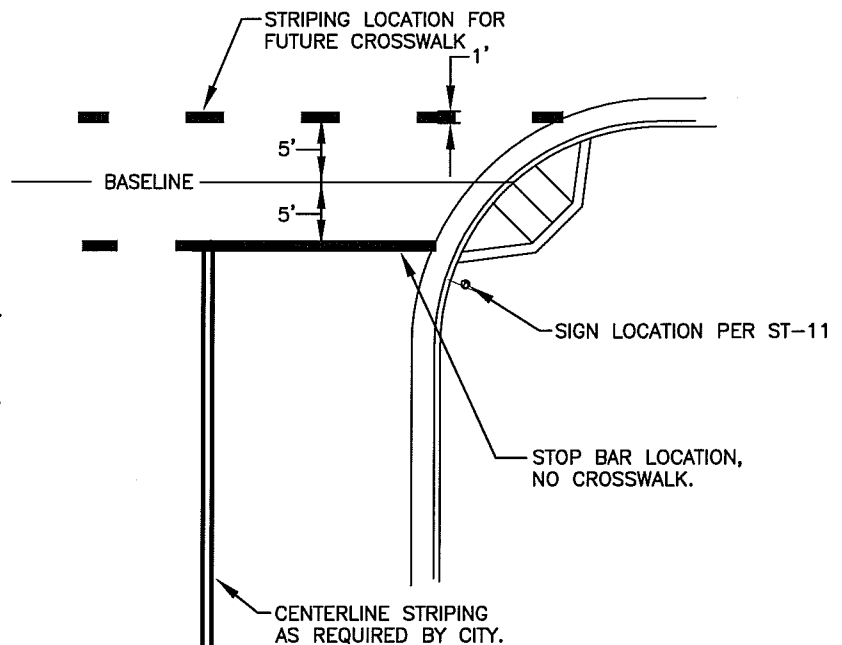
BASELINES FOR STRIPING LAYOUT TO PROJECT FROM CENTER OF RETURNS.

BIKE LANE STRIPING, SEE STANDARD DRAWING FOR INTERSECTION BIKE LANE STRIPING.

BIKE LANE STRIPING TO BEGIN AND END AT CURB RETURN OR CROSSWALK.

#### NOTES:

1. CROSSWALKS ARE SHOWN FOR LOCATION ONLY AND MAY OR MAY NOT BE REQUIRED BY THE CITY.
2. STRIPING AT SIGNALIZED OR FUTURE SIGNALIZED INTERSECTIONS SHOULD BE LAID OUT PER TS-7 AND TS-7A.
3. BASELINES FOR STRIPING LAYOUT SHALL PROJECT TO ULTIMATE CURB RETURN LOCATIONS, UNLESS OTHERWISE DIRECTED.
4. ALL STRIPING TO BE CAT-TRACKED, WITH PLACEMENT APPROVED BY CITY PRIOR TO FINAL PAINT APPLICATION.
5. TEMPLATES FOR MARKINGS, ARROWS, ETC. TO BE BORROWED FROM THE CITY STREET MAINT. SECTION, 324-2600, AND RETURNED IN GOOD AND CLEAN CONDITION.
6. UNLESS OTHERWISE SHOWN ON THIS DRAWING, ALL STRIPING SHALL CONFORM TO CALTRANS STANDARD DRAWINGS AND SPECS.



# CITY OF CLOVIS

## INTERSECTION STRIPING AT NON-SIGNALIZED INTERSECTIONS

DWG NO.

**ST-18**

REF.: STD. SPECIFICATIONS  
SECTION 84

APPROVED BY:

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APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

7/29/11

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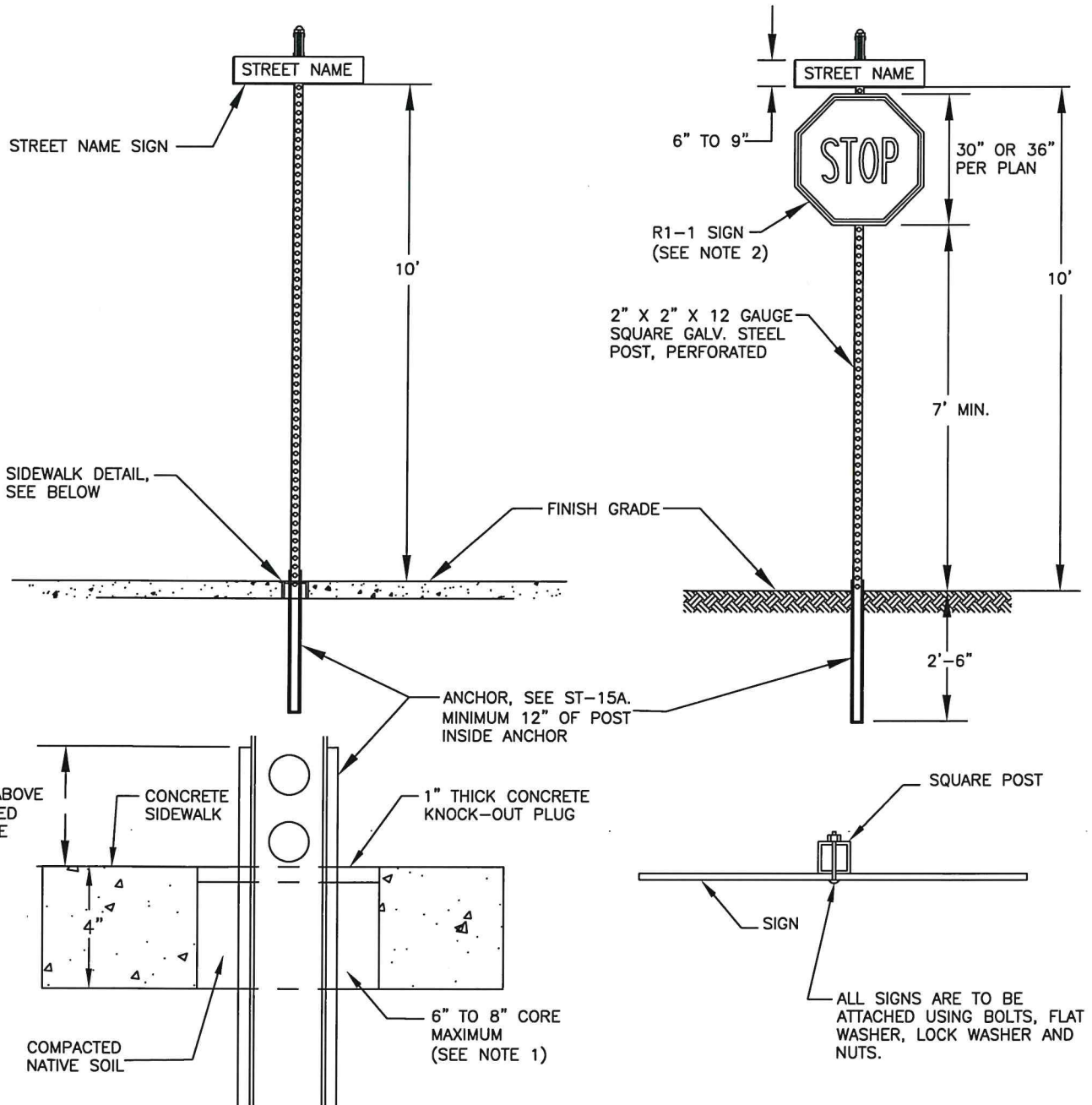
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SHEET 1 OF 1



#### NOTES:

1. SIGN LOCATION TO BE DETERMINED BY THE CITY ENGINEER.
2. R1-1 STOP SIGN TO BE 0.08" THICK ALUMINUM; FACE SHALL HAVE 3M #4090 DG-3 REFLECTIVE SHEETING W/ AN APPLIED 3M #1160 OR EQUAL GRAFFITI FILM. SIGN SHALL CONFORM TO CURRENT CAL MUTCD SPECIFICATIONS.
3. SQUARE POST AND ANCHOR FOR ALL INSTALLATIONS.
4. SEE CITY STD. DRAWING ST-11 FOR SIGN PLACEMENT.
5. SECURE POST TO ANCHOR USING TWO CORNER BOLTS. SEE CITY STD. DRAWING ST-15A.
6. ALL STREET NAME SIGNS TO BE 10' FROM GRADE.



# CITY OF CLOVIS

DWG NO.  
**ST-19**

## STREET NAME & STOP SIGN INSTALLATION

REF.:  
STD. SPECIFICATIONS  
SECTION 84

APPROVED BY:

NO.

REVISED

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APPROVALS

SCALE: NTS

CITY ENGINEER

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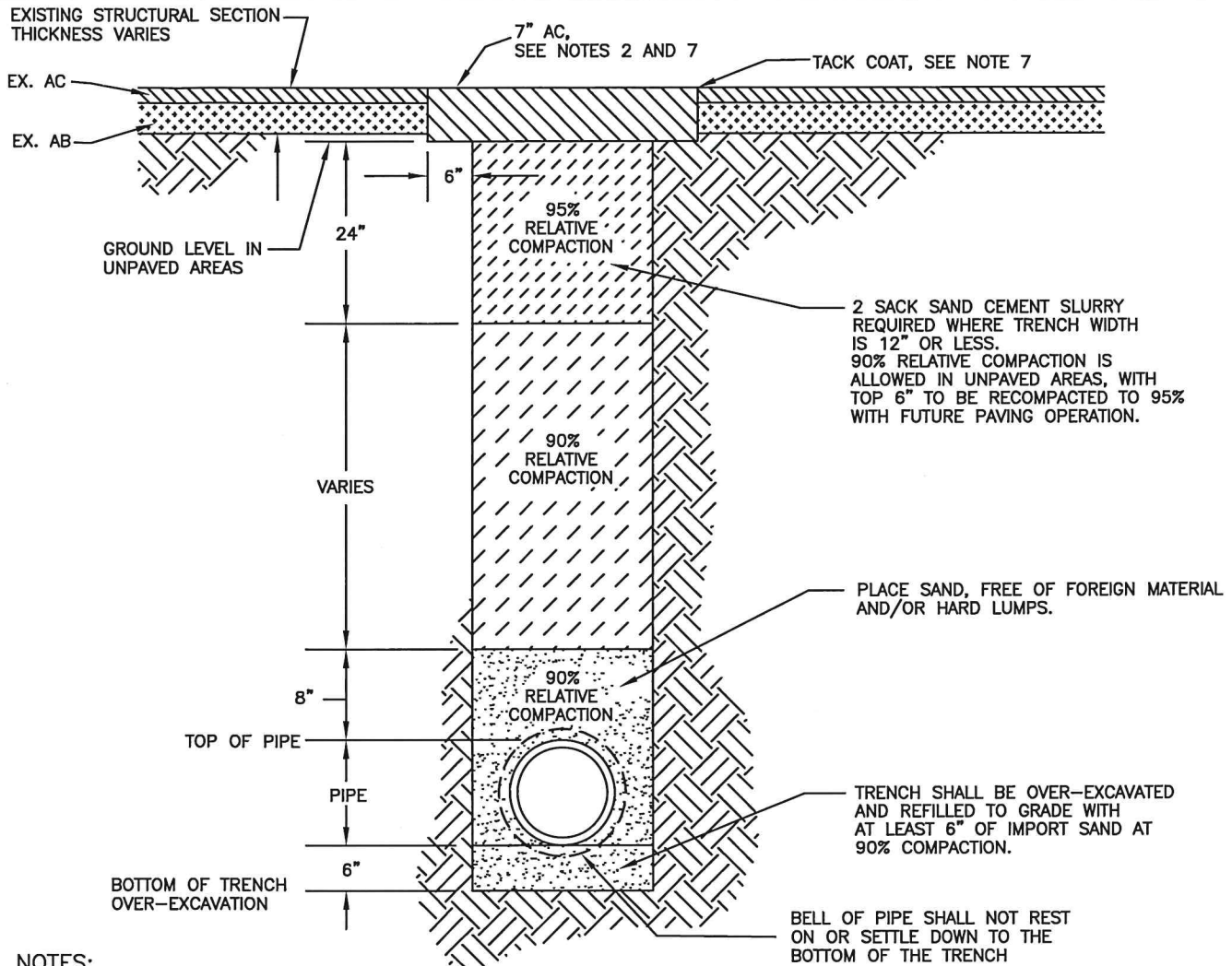
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SHEET 1 OF 1





#### NOTES:

1. TEMPORARY PAVEMENT RESURFACING SHALL CONSIST OF A MINIMUM OF 4" COLD MIX AND SHALL BE REQUIRED WHENEVER THE STREET IS TEMPORARILY OPENED TO TRAFFIC. THE TEMPORARY PAVEMENT SHALL BE MAINTAINED PROPERLY BY THE CONTRACTOR FOR SAFETY. IF PERMANENT PAVEMENT IS NOT SCHEDULED TO BE INSTALLED WITHIN 30 DAYS OF TRENCHING, HMA SHALL BE REQUIRED AS TEMPORARY PAVEMENT. ALL TEMPORARY MATERIAL SHALL BE COMPLETELY REMOVED PRIOR TO FINAL PAVING.
2. PERMANENT RESURFACING OF PAVED AREAS SHALL CONSIST OF 7" A.C. PAVING OR MATCH EXISTING PAVEMENT SECTION IF PAVEMENT CUT IS WIDER THAN 6' UNLESS SPECIFIED OTHERWISE. EXISTING PAVEMENT CUT EDGES SHALL BE SAW-CUT AND TACK COAT SHALL BE APPLIED PRIOR TO FINAL PAVING.
3. PAVEMENT CUT RESURFACING OF STRUCTURAL SECTIONS OTHER THAN PERMANENTLY PAVED OR UNPAVED AREAS SHALL BE DETERMINED BY THE CITY ENGINEER.
4. ALL BACKFILL WILL BE TESTED FOR OPTIMUM MOISTURE. TO BE CONSIDERED A PASSING TEST, THE IN-PLACE MATERIAL MUST BE WITHIN 2% (ABOVE OR BELOW) THE OPTIMUM MOISTURE.
5. NO JETTING OF BACKFILL WILL BE ALLOWED. BACKFILL IS TO BE PLACED IN MAXIMUM 18" LIFTS, THEN COMPACTED.
6. FOR PAVEMENT EXCAVATION WITH DIAMETER 9" OR LESS OR MAXIMUM DIMENSION IN ANY DIRECTION OF 9" OR LESS, OR WHERE DIRECTED BY THE ENGINEER, BACKFILL SHALL COMPLY WITH ST-21, BACKFILL AND RESURFACING - AC EXCAVATION.
7. UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER, ALL CUTS MADE IN PAVEMENT GENERALLY 5 YEARS AND YOUNGER SHALL BE TREATED WITH THE INFRARED PAVEMENT REPAIR PROCESS A MINIMUM OF 6" ON EACH SIDE OF SAWCUT, PER SECTION 19-3.05 OF THE CITY STANDARD SPECIFICATIONS. FOR PAVEMENT CUTS LESS THAN 2' IN WIDTH, THE INFRARED PAVEMENT REPAIR SHALL BE APPLIED TO THE ENTIRE AREA. WHEN INFRARED PAVEMENT REPAIR IS NOT REQUIRED, A CRACK SEALANT SHALL BE APPLIED ALONG THE PAVEMENT CUTS.
8. IT IS THE INTENT AND PREFERENCE THAT SAND BE USED TO ENSURE PIPE PROTECTION AND PROPER COMPACTION AROUND THE PIPE. WHERE SUITABLE GRANULAR MATERIAL IS ENCOUNTERED IN THE FIELD, SUCH ALTERNATIVE BACKFILL MATERIAL MAY BE CONSIDERED ON A CASE BY CASE BASIS, SUBJECT TO APPROVAL BY THE CITY ENGINEER.



# CITY OF CLOVIS

## BACKFILL AND RESURFACING - TRENCH

DWG NO.

ST-20

REF.:  
STD. SPECIFICATIONS  
SECTION 19

APPROVED BY:

*[Signature]*

CITY ENGINEER

DATE: 1/6/2020

NO.

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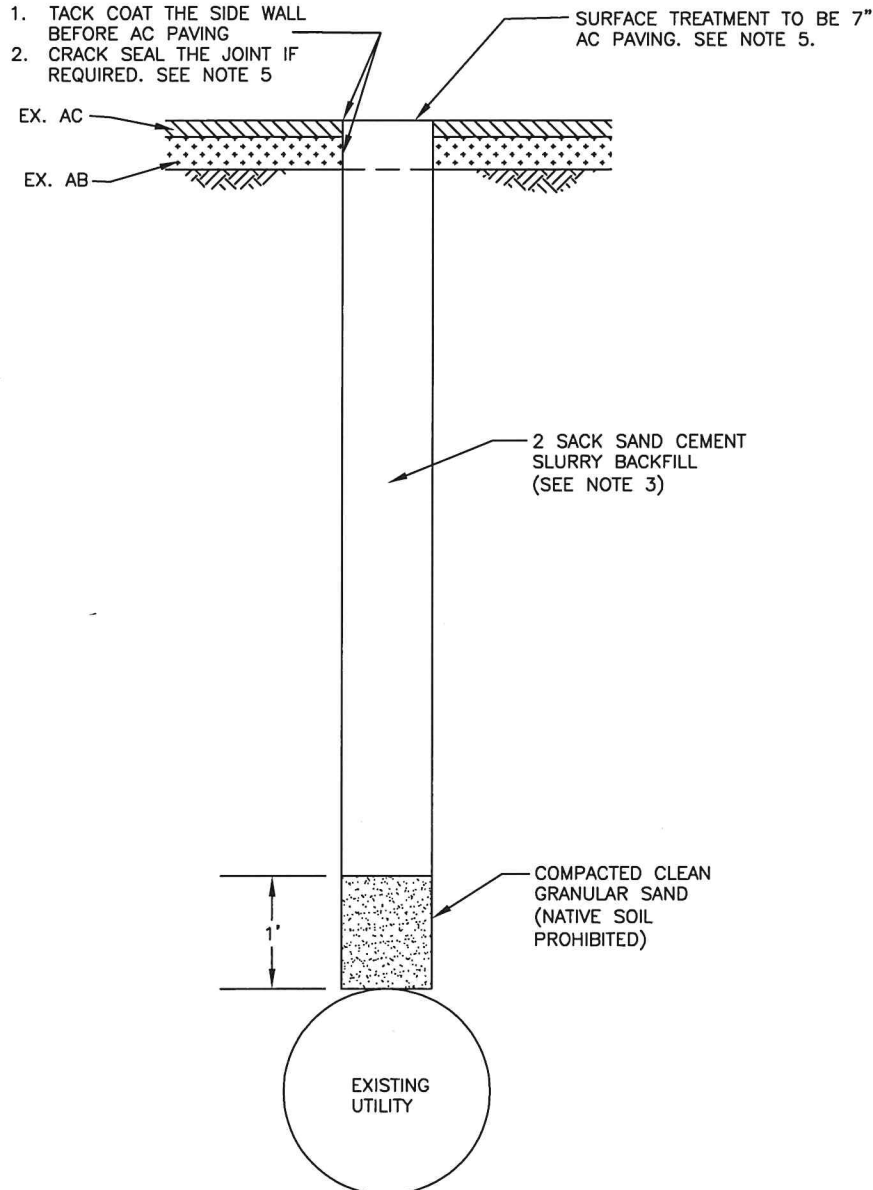
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SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1





**NOTES:**

1. THIS BACKFILL METHOD IS REQUIRED FOR AC EXCAVATION OF 9" DIAMETER OR LESS, OR MAXIMUM DIMENSION IN ANY DIRECTION OF 9" OR LESS, OR ANY AC EXCAVATION DIRECTED BY THE ENGINEER TO BE BACKFILLED BY THIS METHOD. FOR INVESTIGATIVE WORK LESS THAN 4" IN DIAMETER, BLACK CONCRETE SLURRY BACKFILL TO FINISH GRADE IS ACCEPTABLE WITH CITY ENGINEER APPROVAL.
2. AC EXCAVATION WITH DIMENSIONS GREATER THAN 9" SHALL BE BACKFILLED PER THE STANDARD DRAWING ST-20 FOR TRENCH BACKFILL AND SURFACE RESTORATION.
3. SLURRY CEMENT BACKFILL PLACEMENT SHALL CONFORM TO SECTION 19-3.03F OF THE STATE STANDARD SPECIFICATIONS.
4. TEMPORARY RESURFACING SHALL CONSIST OF A MINIMUM OF 4" COLD MIX AND SHALL BE REQUIRED WHENEVER THE STREET IS TEMPORARILY OPENED TO TRAFFIC. PERMANENT PAVEMENT RESURFACING SHALL BE INSTALLED WITHIN 7 DAYS AFTER THE INITIAL PAVEMENT CUT. ALL TEMPORARY MATERIAL SHALL BE COMPLETELY REMOVED PRIOR TO FINAL PAVING.
5. UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER, ALL CUTS MADE IN PAVEMENT GENERALLY 5 YEARS AND YOUNGER SHALL BE TREATED WITH THE INFRARED PAVEMENT REPAIR PROCESS A MINIMUM OF 6" ON EACH SIDE OF SAWCUT, PER SECTION 19-3.05 OF THE CITY STANDARD SPECIFICATIONS. WHEN INFRARED PAVEMENT REPAIR IS NOT REQUIRED, A CRACK SEALANT SHALL BE APPLIED ALONG THE PAVEMENT CUTS.



# CITY OF CLOVIS

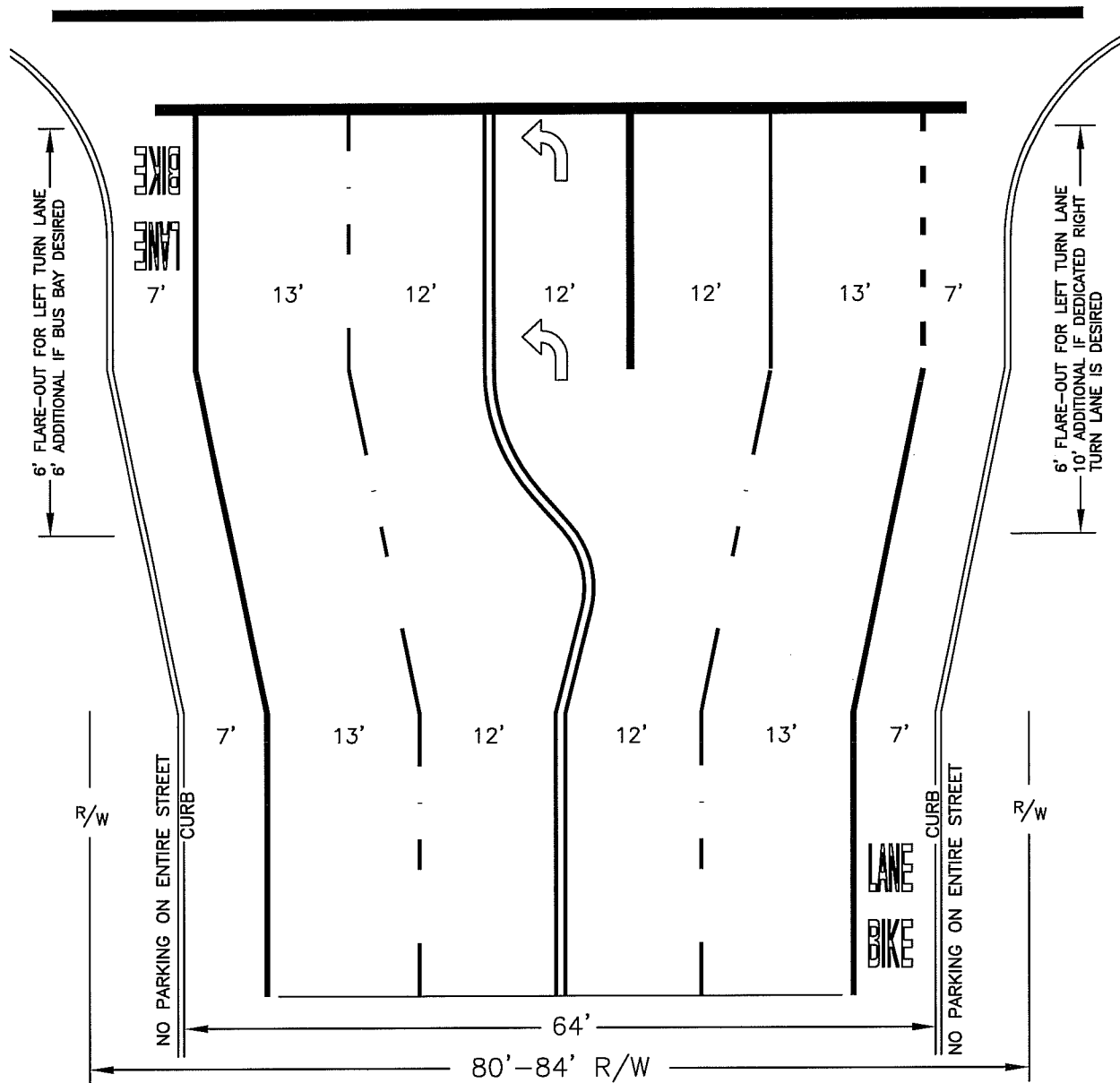
DWG NO.

**ST-21**

## BACKFILL AND RESURFACING - AC EXCAVATION


REF.:  
STD. SPECIFICATIONS  
SECTION 8-15

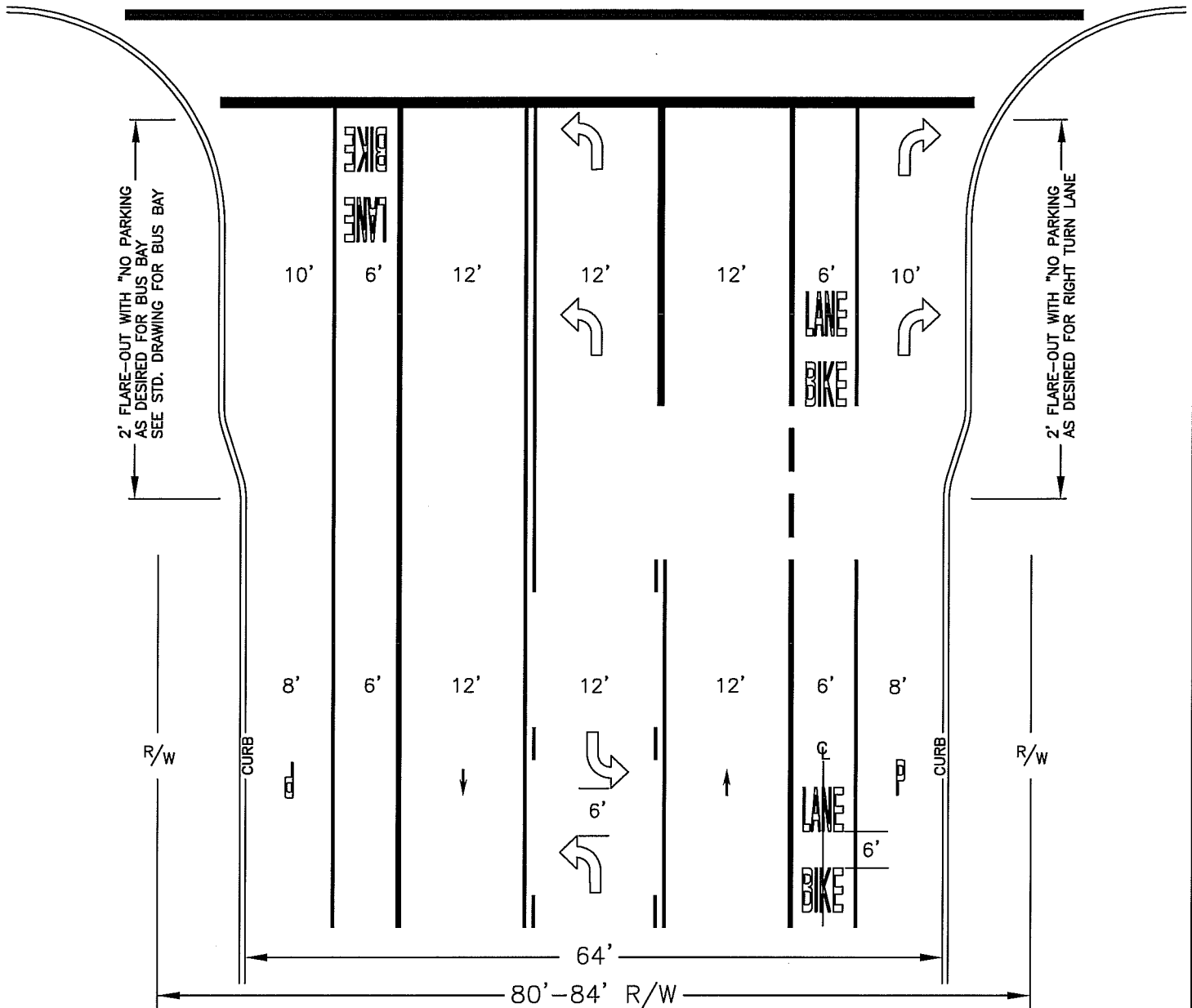
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		05-12-09	BGJ		DRAWN BY: JA
		02-15-11	BGJ		
	3	03-27-19	CGV		SHEET 1 OF 1



**NOTE:**

THIS DRAWING IS SCHEMATIC AND A DESIGN AID ONLY. SPACING AND SIZING OF ARROWS, LEGENDS, STRIPING, LENGTH OF LEFT AND RIGHT TURN LANES, AND ALL OTHER DESIGN DETAILS SHALL CONFORM TO THE LATEST EDITION OF CALMUTCD.

	<h1 style="margin: 0;">CITY OF CLOVIS</h1>				DWG NO. <h2 style="margin: 0;">ST-22</h2>	
	<h2 style="margin: 0;">GEOMETRICS, 4 LANE COLLECTOR</h2>					
APPROVED BY:  CITY ENGINEER DATE: 7/29/11	NO. _____	REVISED 06-17-09	BY BGJ	APPROVALS CM DRU PUD		SCALE: NTS  DRAWN BY: JA  SHEET 1 OF 1



**NOTE:**

THIS DRAWING IS SCHEMATIC AND A DESIGN AID ONLY. SPACING AND SIZING OF ARROWS, LEGENDS, STRIPING, LENGTH OF LEFT AND RIGHT TURN LANES, AND ALL OTHER DESIGN DETAILS SHALL CONFORM TO THE LATEST EDITION OF CALMUTCD.



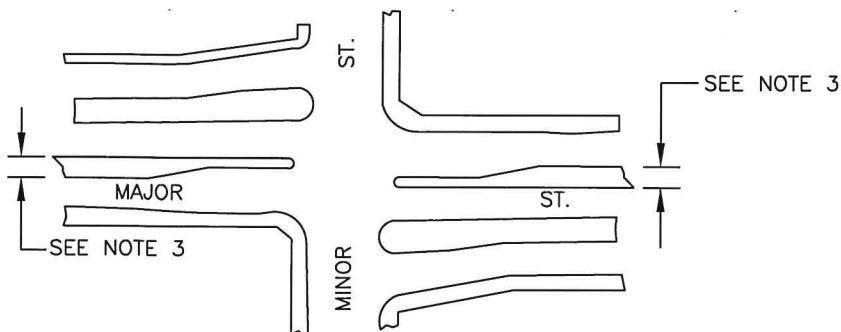
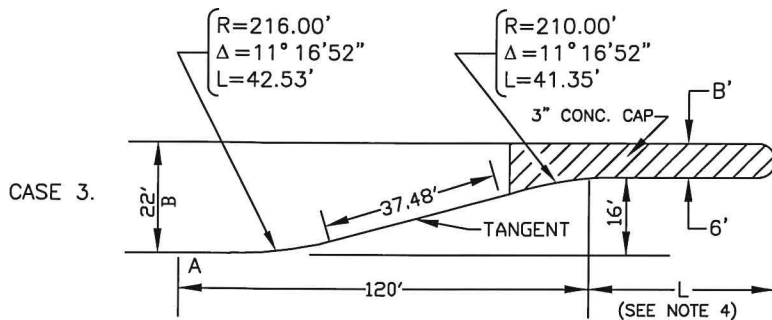
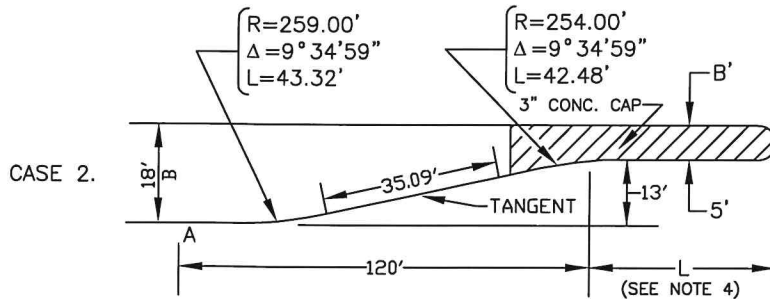
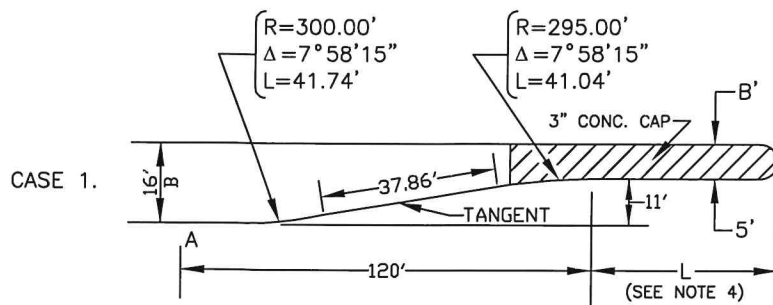
# CITY OF CLOVIS

GEOMETRICS, COLLECTOR  
W/ 2-WAY LEFT TURN LANE

DWG NO.  
**ST-22A**

REF.: STD. SPECIFICATIONS  
SECTION 84

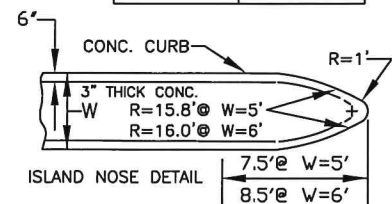
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		06-17-09	BGJ		DRAWN BY: JA
CITY ENGINEER		01-14-11	BGJ	CM DRU PUD	SHEET 1 OF 1
DATE: 7/19/11					



CURVE TABLE	
DIST. FROM POINT 'A'	OFFSET B-B'=11'
0'	0.00'
10'	0.17'
20'	0.67'
30'	1.50'
40'	2.68'
41.60'	2.90'
50'	4.08'
60'	5.48'
70'	6.88'
79.09'	8.15'
80'	8.28'
90'	9.47'
100'	10.32'
110'	10.83'
120'	11.00'

CURVE TABLE	
DIST. FROM POINT 'A'	OFFSET B-B'=13'
0'	0.00'
10'	0.19'
20'	0.77'
30'	1.74'
40'	3.08'
43.12'	3.61'
50'	4.77'
60'	6.46'
70'	8.16'
77.71'	9.46'
80'	9.86'
90'	11.23'
100'	12.21'
110'	12.80'
120'	13.00'

CURVE TABLE	
DIST. FROM POINT 'A'	OFFSET B-B'=16'
0'	0.00'
10'	0.23'
20'	0.93'
30'	2.08'
40'	3.69'
42.25'	4.17'
50'	5.80'
60'	7.90'
70'	10.00'
78.92'	11.92'
80'	12.20'
90'	13.86'
100'	15.05'
110'	15.76'
120'	16.00'



#### NOTES:

1. END 3" THICK CLASS 3 CONCRETE CAP WHERE CURBS ARE 9' APART, AS MEASURED FROM INSIDE BACK OF CURBS. CERTAIN LOCATIONS MAY REQUIRE STAMPED CONCRETE.
2. CONCRETE GUTTER TO BE USED WHERE REQUIRED.
3. WIDTH DETERMINED BY SELECTED CASE 1, 2 OR 3.
4. DISTANCE "L" TO BE DETERMINED BY THE ENGINEER.



# CITY OF CLOVIS

## MEDIAN ISLAND INTERSECTION LEFT TURN POCKETS

DWG NO.

ST-23

N.A.

APPROVED BY:

CITY ENGINEER

DATE: 4/5/21

NO.

REVISED

BY

APPROVALS

SCALE: NTS

06-17-09

01-14-11

CGV

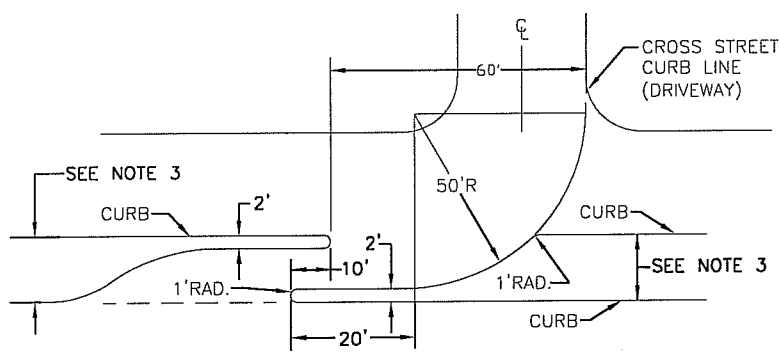
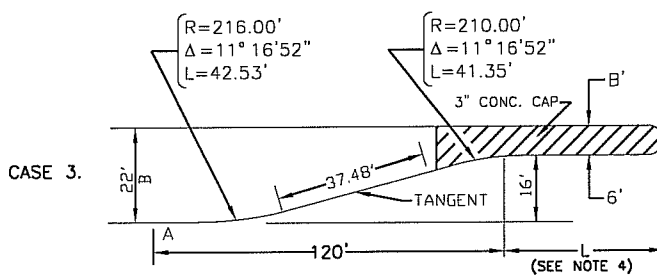
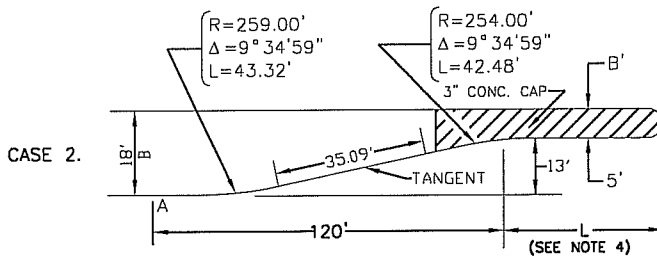
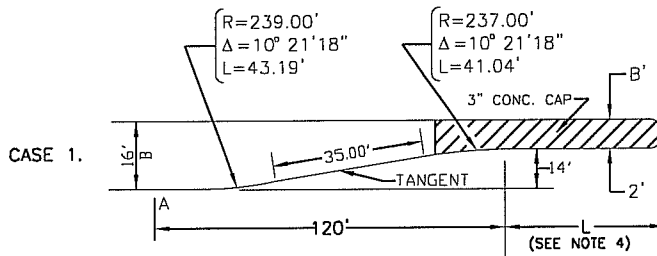
CM

DRU

PUD

DRAWN BY: JA

SHEET 1 OF 1



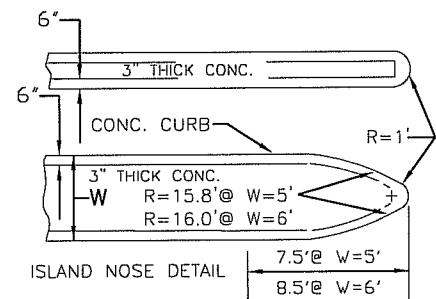
# NOTES:

1. END 3" THICK CLASS 3 CONCRETE CAP WHERE CURBS ARE 9' APART, AS MEASURED FROM INSIDE BACK OF CURBS. CERTAIN LOCATIONS MAY REQUIRE STAMPED CONCRETE.
2. CONCRETE GUTTER TO BE USED WHERE REQUIRED.
3. WIDTH DETERMINED BY SELECTED CASE 1, 2 OR 3.
4. DISTANCE "L" TO BE DETERMINED BY THE ENGINEER.

CURVE TABLE	
DIST. FROM POINT 'A'	OFFSET B-B'=14'
0'	0.00'
10'	0.21'
20'	0.84'
30'	1.88'
40'	3.34'
42.95'	3.89'
50'	5.17'
60'	6.98'
70'	8.80'
77.40'	10.14'
80'	10.63'
90'	12.10'
100'	13.15'
110'	13.79'
120'	14.00'

CURVE TABLE	
DIST. FROM POINT 'A'	OFFSET B-B'=13'
0'	0.00'
10'	0.19'
20'	0.77'
30'	1.74'
40'	3.08'
43.12'	3.61'
50'	4.77'
60'	6.46'
70'	8.16'
77.71'	9.46'
80'	9.86'
90'	11.23'
100'	12.21'
110'	12.80'
120'	13.00'

CURVE TABLE	
DIST. FROM POINT 'A'	OFFSET B-B'=16'
0'	0.00'
10'	0.23'
20'	0.93'
30'	2.08'
40'	3.69'
42.25'	4.17'
50'	5.80'
60'	7.90'
70'	10.00'
78.92'	11.92'
80'	12.20'
90'	13.86'
100'	15.05'
110'	15.76'
120'	16.00'



## CITY OF CLOVIS

### MEDIAN ISLAND MID-BLOCK LEFT TURN POCKET

DWG NO.

ST-24

N.A.

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

NO.

REVISED

BY

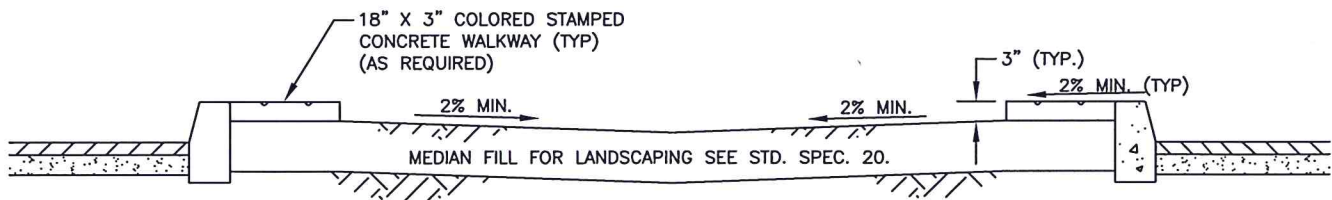
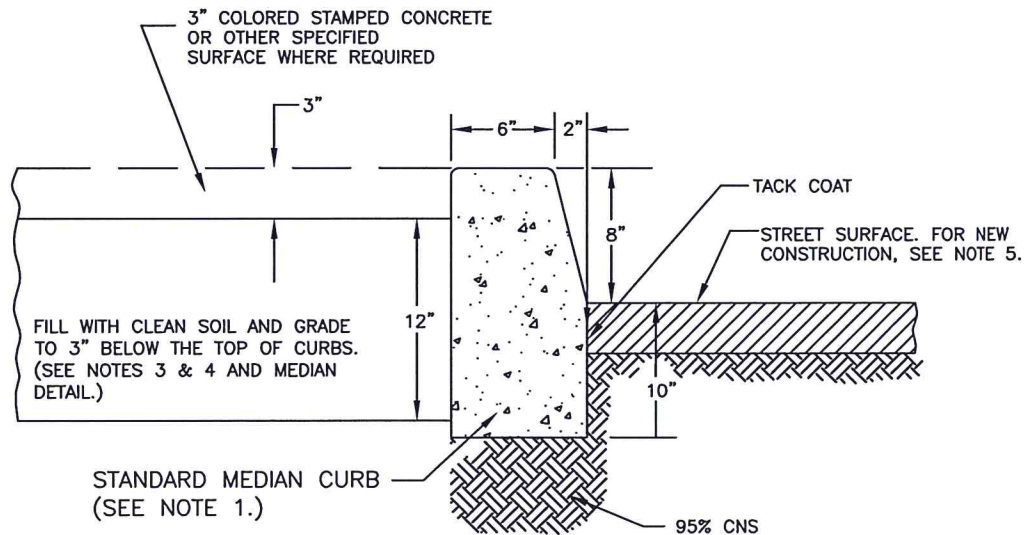
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DRAWN BY: JA


SHEET 1 OF 1

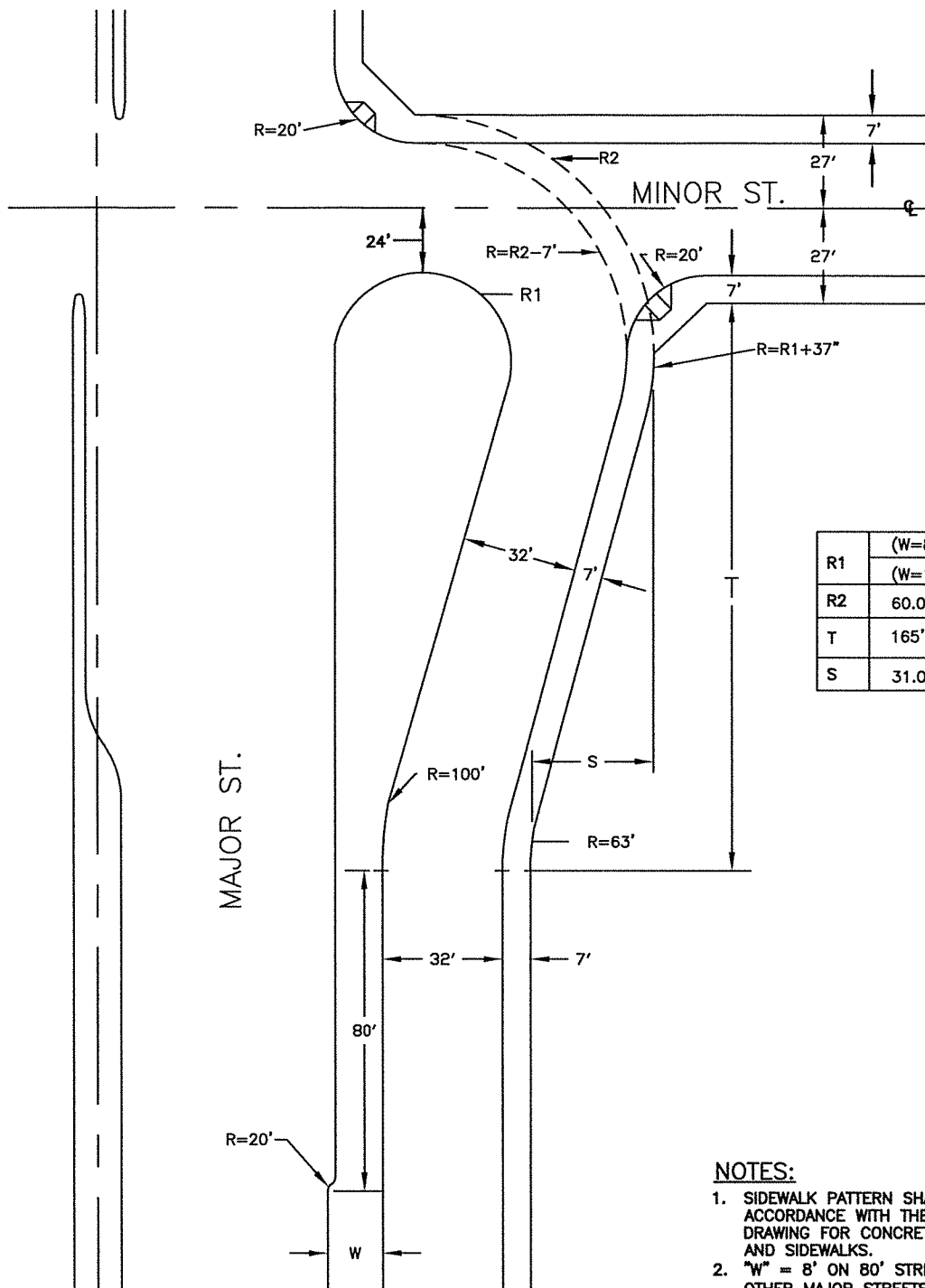


MEDIAN DETAIL

NOTES:

1. FORMED CURB SHALL BE CLASS 3 CONCRETE; EXTRUDED CURBS SHALL BE CLASS 2.
2. CURBS SHALL BE BROOM FINISH.
3. COMPACT MEDIAN FILL MATERIAL TO 90% UNDER SURFACES TO BE PAVED.
4. MEDIAN FILL MATERIAL MAY VARY DEPENDING ON LANDSCAPING REQUIREMENTS.
5. FILL INSIDE MEDIAN BEFORE PLACING AND/OR COMPACTING MATERIAL IN THE TRAVELED WAY.
6. ALL COLORED STAMPED CONCRETE SHALL BE SEALED WITH TWO COATS OF "CLEAR SEAL 100", OR APPROVED EQUAL.

	<h1>CITY OF CLOVIS</h1> <h2>MEDIAN ISLAND CURB DETAILS</h2> <p>(NEW AC PAVEMENT)</p>				DWG NO. <h1>ST-25</h1>
					REF.: STD. SPECIFICATIONS
APPROVED BY:	NO.	REVISED	BY	APPROVALS	SCALE: NTS
CITY ENGINEER <i>[Signature]</i>		3-26-12	PAA	CM <i>[Signature]</i>	DRAWN BY: JA
DATE: 6/29/17		05-29-12	PAA	DRU <i>[Signature]</i>	SHEET 1 OF 1
		09-28-12	PAA	PUD <i>[Signature]</i>	
		06-12-17	CGV		



**NOTES:**

1. SIDEWALK PATTERN SHALL BE IN ACCORDANCE WITH THE STANDARD DRAWING FOR CONCRETE CURB & GUTTER AND SIDEWALKS.
2. "W" = 8' ON 80' STREETS, 10' ON ALL OTHER MAJOR STREETS (84', 100', 106').



# CITY OF CLOVIS

## FRONTAGE ROAD BULB DESIGN

DWG NO.

**ST-26**

N.A.

APPROVED BY:

CITY ENGINEER

DATE:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

06-19-09

BGJ

CM

DRAWN BY: JA

01-14-11

BGJ

DRU

SHEET 1 OF 1

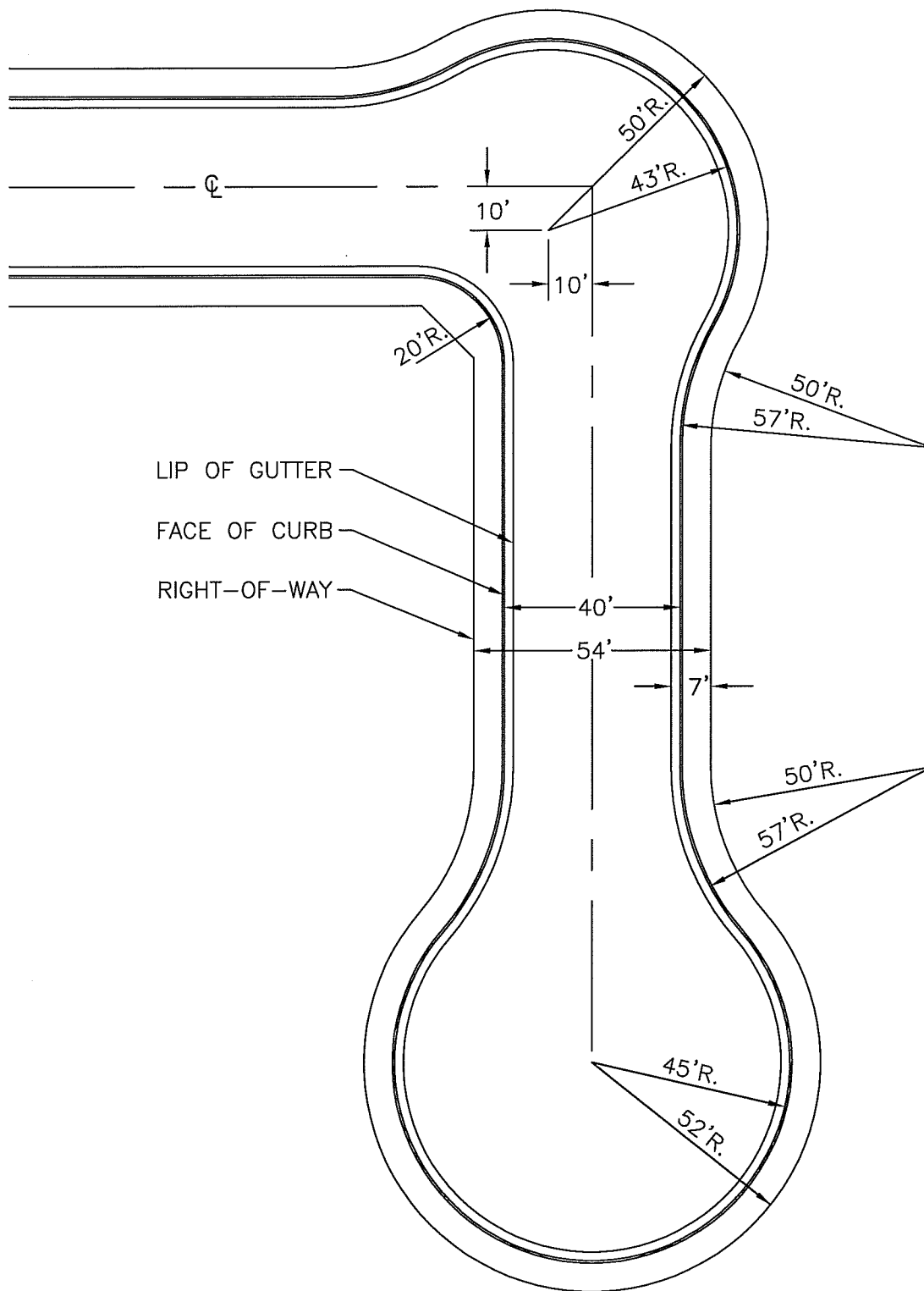
01-30-14


PAA

PUD

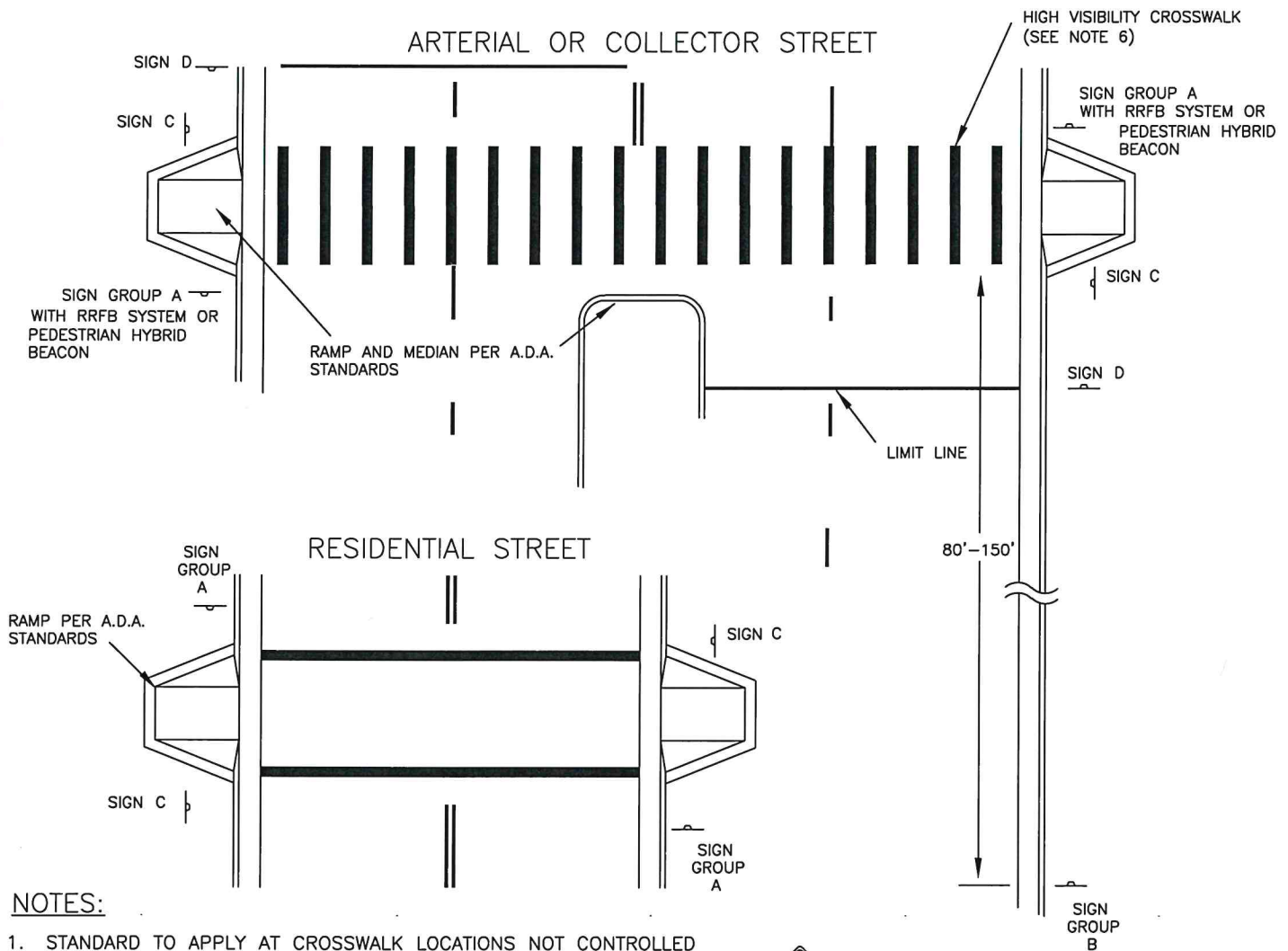
06-11-15

CGV



	<h1 style="margin: 0;">CITY OF CLOVIS</h1>				DWG NO. <h2 style="margin: 0;">ST-27</h2>
	RESIDENTIAL STREET KNUCKLE AND CUL-DE-SAC DESIGN				N.A.
APPROVED BY:  CITY ENGINEER DATE: <i>7/19/11</i>	NO. _____ _____ _____	REVISED 07-09-09 01-14-11	BY BGJ BGJ	APPROVALS CM DRU PUD <i>[Signature]</i>	SCALE: NTS DRAWN BY: JA SHEET 1 OF 1





#### NOTES:

1. STANDARD TO APPLY AT CROSSWALK LOCATIONS NOT CONTROLLED BY STOP SIGNS OR TRAFFIC SIGNALS.
2. SIGN GROUPS A AND B TO BE FLUORESCENT YELLOW-GREEN 0.08" THICK ALUMINUM; FACE SHALL HAVE 3M DG-3 REFLECTIVE SHEETING W/AN APPLIED 3M #1160 OR EQUAL GRAFFITI FILM. SIGN SHALL CONFORM TO CAL MUTCD SPECIFICATIONS. SIGN S1-1 TO BE USED AT SCHOOL CROSSINGS ONLY. SIGN W11-2 TO BE USED AT ALL OTHER LOCATIONS.
3. RECTANGULAR RAPID FLASH BEACON (RRFB) LIGHTING SYSTEM MAY BE SOLAR-POWERED OR CONNECTED TO NEARBY METERED POWER, UPON APPROVAL OF CITY ENGINEER. THE RRFB SHOULD BE MOUNTED ON 2 1/2" X 2 1/2" X 12 GAUGE POST.
4. WITH A PED HYBRID BEACON, ALSO USE R10-23.
5. SIGN GROUP C CONSISTS OF R1-1/W4-4P FOR MID-BLOCK CROSSING.
6. INSTALL HIGH VISIBILITY CROSSWALK USING VIZIGRIP PREFORMED THERMOPLASTIC MATERIAL OR APPROVED EQUAL, WITH 2' STRIPE AND 2' SPACE. ALL CROSSWALK MARKINGS MUST BE WHITE EXCEPT THOSE NEAR SCHOOLS MUST BE YELLOW.
7. YIELD LINES, PED XING OR SCHOOL XING PAVEMENT MARKINGS MAY BE PLACED IN EACH APPROACH LANE TO A MARKED MID-BLOCK CROSSWALK AS DIRECTED BY THE CITY ENGINEER.



W11-2  
W16-7P



S1-1  
W16-7P

SIGN GROUP A  
(SEE NOTE 2)



W11-2  
W16-9P



S1-1  
W16-9P

SIGN GROUP B  
(SEE NOTE 2)

12" x 18" SIGN  
(NON-STANDARD)



48" TO 54" AG



R10-23  
SIGN  
D

(SEE NOTE 4)



# CITY OF CLOVIS

## MID-BLOCK PEDESTRIAN CROSSING

DWG NO.

ST-28

REF.: STD. SPECIFICATIONS  
SECTION 84

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE: 15:26:59-08'00'

4

01-11-20

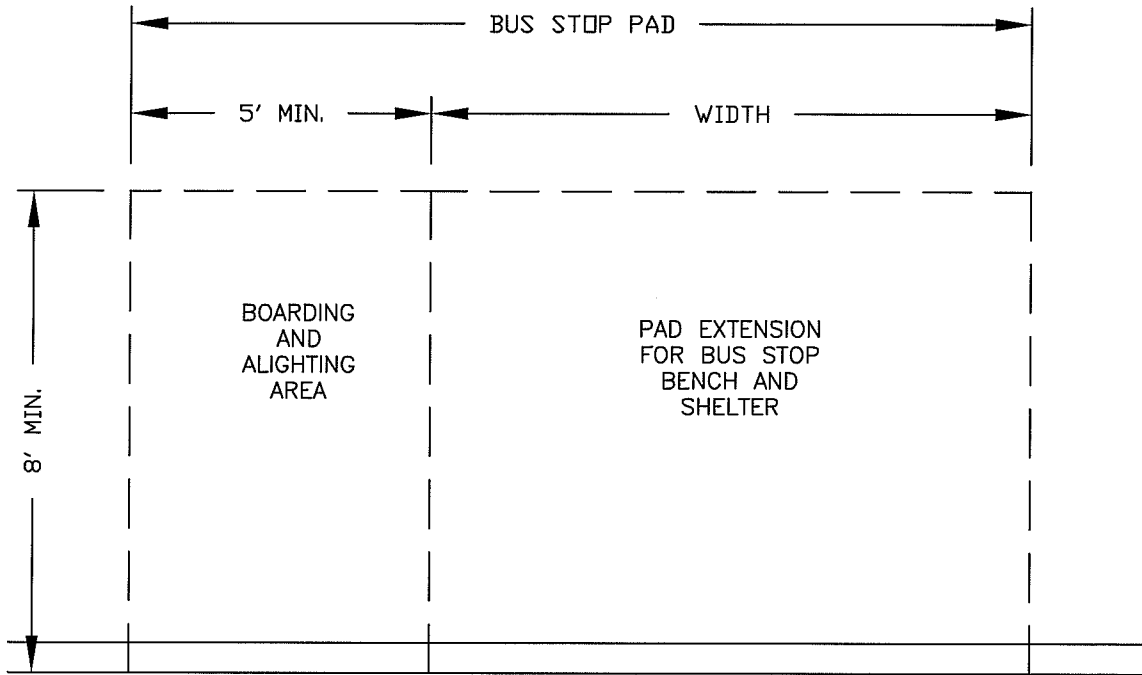
CGV

CM  
DRU  
PUD

DRAWN BY: JA

SHEET 1 OF 1

BUS STOP PAD = BOARDING AND ALIGHTING AREA + PAD EXTENSION (WHEN REQUIRED)



DIMENSIONS FOR PAD EXTENSION	
FACILITY	WIDTH
BENCH ONLY	10' MIN.
BUS SHELTER	15' MIN.

CURB FACE OR VEHICLE ROADWAY EDGE

#### NOTES:

1. AN ACCESSIBLE ROUTE SHALL CONNECT THE BOARDING AND ALIGHTING AREA TO ACCESSIBLE FACILITIES AND ELEMENTS, SUCH AS, SIDEWALKS, CLEAR FLOOR SPACE, BENCH, SHELTER, TRASH RECEPTACLE AND TRANSIT TUBE.
2. PERPENDICULAR TO THE ROADWAY, THE SLOPE OF THE BUS STOP PAD SHALL NOT EXCEED 2%.
3. PARALLEL TO THE ROADWAY, THE SLOPE OF THE BUS STOP PAD SHALL BE THE SAME AS THE ROADWAY.
4. THE BOUNDARY BETWEEN THE PEDESTRIAN AREAS (INCLUSIVE OF THE BUS STOP PAD) AND ROADWAY SHALL BE SEPARATED BY A SQUARE CURB SURFACE OR OTHER DETECTABLE WARNING IN ACCORDANCE WITH CURRENT ADA STANDARDS.
5. REFER TO CITY STANDARD ST-5 FOR COMPACTION, CONCRETE THICKNESS, SCORE AND JOINT PATTERN, AND SURFACE FINISH OF THE BUS STOP PAD.
6. FINISHED SURFACE OF THE BUS STOP PAD SHALL BE COMPLETED IN ACCORDANCE WITH CURRENT ADA STANDARDS.
7. A CITY APPROVED BUS STOP SIGN SHALL BE INSTALLED AT THE STOP. ATTACHING SIGN TO A LIGHT POLE IS PREFERRED, OTHERWISE, INSTALL SIGN AS DIRECTED BY CITY ENGINEER.
8. WHEN A BENCH IS PROVIDED, A 30"x48" CLEAR FLOOR SPACE SHALL BE PROVIDED IMMEDIATELY ADJACENT TO THE BENCH FOR WHEELCHAIR ACCESSIBILITY IN ACCORDANCE WITH CURRENT ADA STANDARDS. THE BENCH AND CLEAR FLOOR SPACE SHALL NOT ENCROACH INTO THE BOARDING AND ALIGHTING AREA.
9. WHEN A SHELTER IS PROVIDED, A 30"x48" CLEAR FLOOR SPACE SHALL BE PROVIDED COMPLETELY WITHIN THE BUS STOP SHELTER FOR WHEELCHAIR ACCESSIBILITY IN ACCORDANCE WITH CURRENT ADA STANDARDS.
10. TRANSIT TUBES SHALL BE CONNECTED TO AN ACCESSIBLE ROUTE AND INSTALLED (FOR EXAMPLE CLEAR FLOOR SPACE, REACH RANGE AND OPERATION HEIGHT) IN ACCORDANCE WITH CURRENT ADA STANDARDS. THE OPERATION HEIGHT OF THE TRANSIT TUBE SHALL NOT EXCEED 40" ABOVE FINISH SURFACE OF THE CLEAR FLOOR SPACE.



# CITY OF CLOVIS

DWG NO.

## ST-29

### BUS STOP

REF. CURRENT ADA STANDARDS

APPROVED BY:

NO.

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BY

APPROVALS

SCALE: NTS

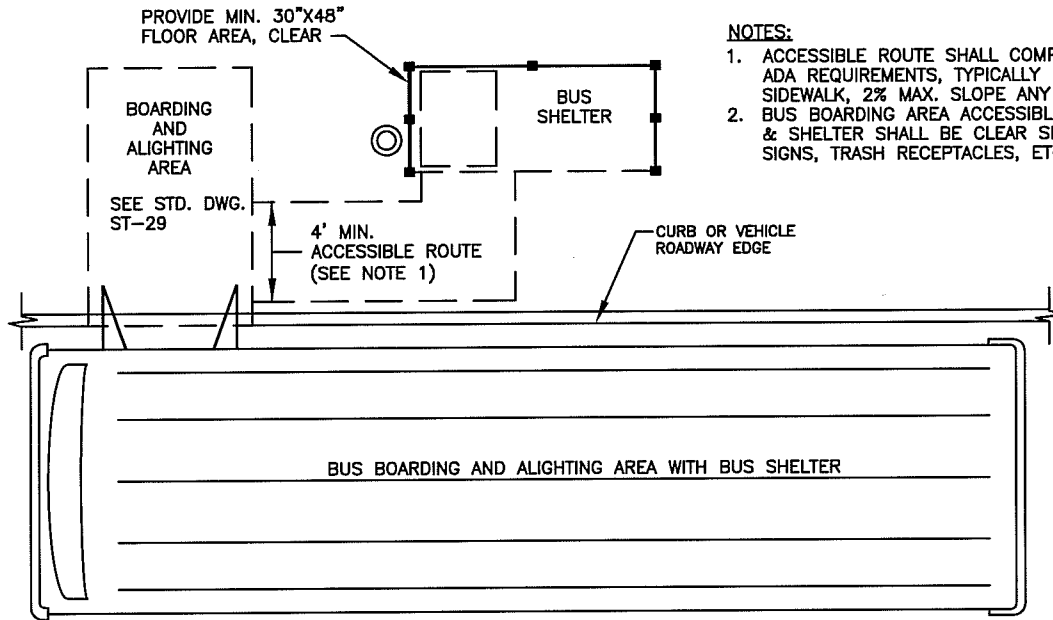
CITY ENGINEER

DATE:

CM  
DRU  
PUD

DRAWN BY: JA

SHEET 1 OF 1

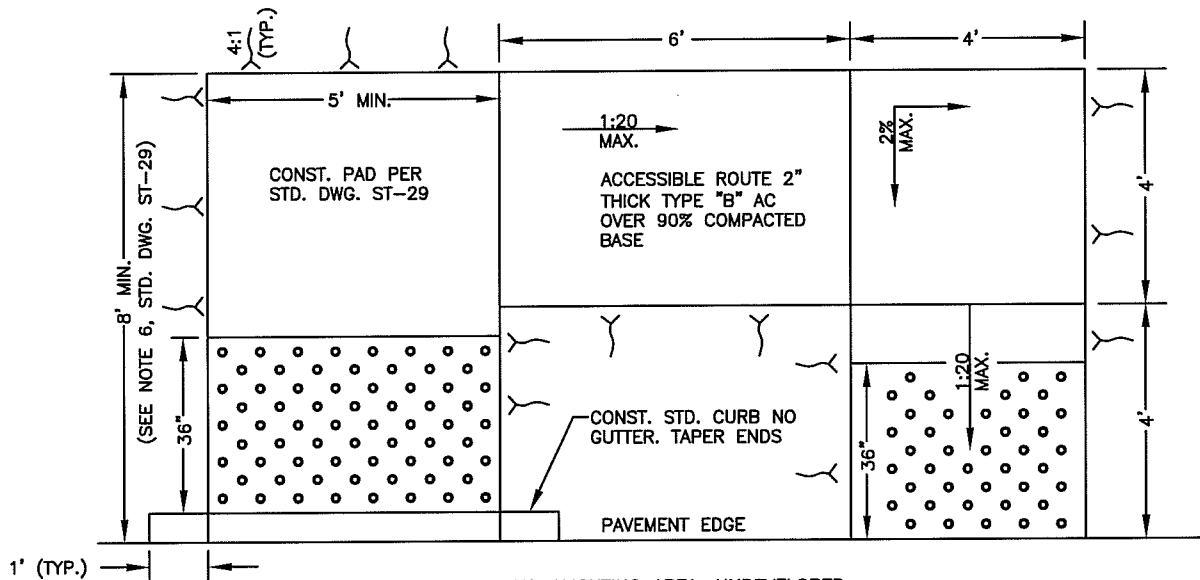


**NOTES:**

1. ACCESSIBLE ROUTE SHALL COMPLY WITH ADA REQUIREMENTS, TYPICALLY CONCRETE SIDEWALK, 2% MAX. SLOPE ANY DIRECTION.
2. BUS BOARDING AREA ACCESSIBLE ROUTE, & SHELTER SHALL BE CLEAR SPACE. NO SIGNS, TRASH RECEPTACLES, ETC.

**NOTES:**

- A. THIS TYPE OF BUS STOP SHALL ONLY BE USED IN UNDEVELOPED AREAS IN SPECIFIC RESPONSE TO INDIVIDUAL SPECIAL NEED.



BUS BOARDING AND ALIGHTING AREA, UNDEVELOPED LOCATIONS, NO CURB, GUTTER, SIDEWALKS (SEE NOTE A)



**CITY OF CLOVIS**

DWG NO.

**ST-29A**

**BUS STOP**

REF.

N.A.

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

*[Signature]*  
7/29/11

07-14-09

01-14-11

BGJ

BGJ

CM

DRU

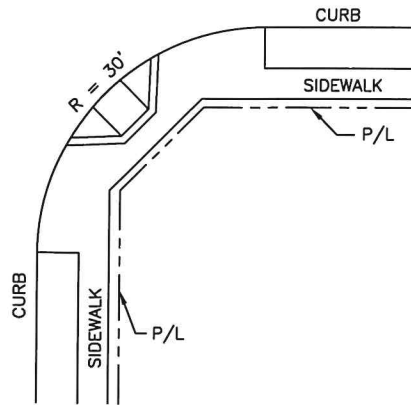
PUD

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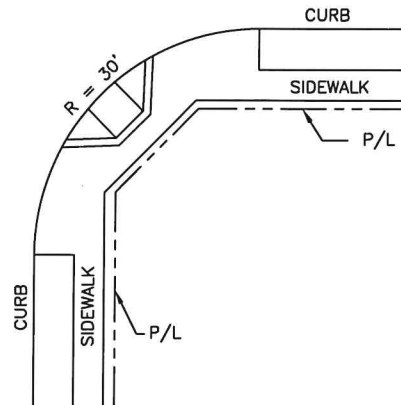
DRAWN BY: BGJ

SHEET 1 OF 1

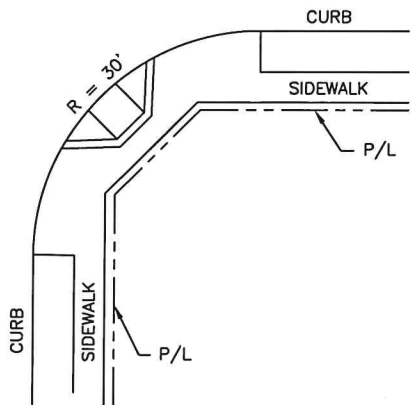
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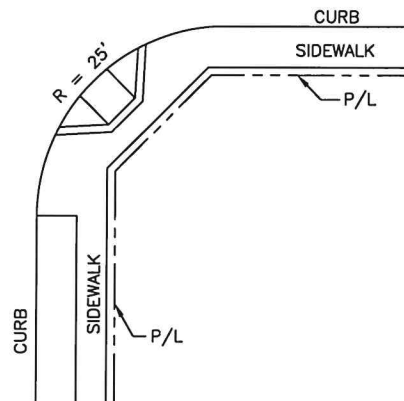
COLLECTOR/COLLECTOR



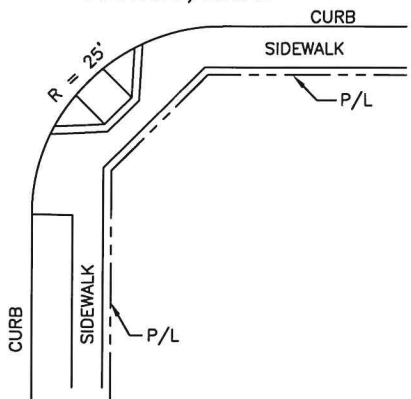
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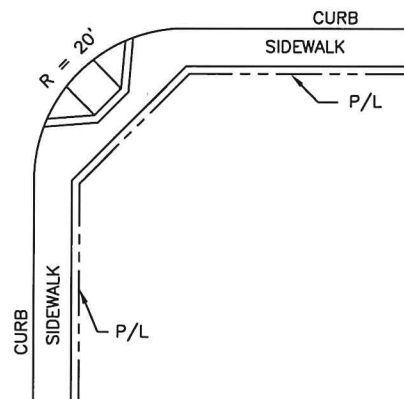
COLLECTOR/LOCAL



ARTERIAL/LOCAL



LOCAL/LOCAL



## NOTES:

1. RADII MAY VARY TO MEET LOCAL GEOMETRIC CONDITIONS.
2. CURB RAMPS ARE SCHEMATIC ONLY. EACH CORNER SHALL BE DESIGNED TO MEET ADA STANDARDS. SEE ST-11 FOR CURB RAMPS.



## CITY OF CLOVIS

## STANDARD CORNER RADII CONFIGURATION

DWG NO.

ST-31

N.A.

APPROVED BY:

CITY ENGINEER

DATE: 4/5/21

NO.

REVISED

BY

APPROVALS

SCALE: NTS

06-18-09

BGJ

CM

06-11-15

CGV

DRU

08-13-20

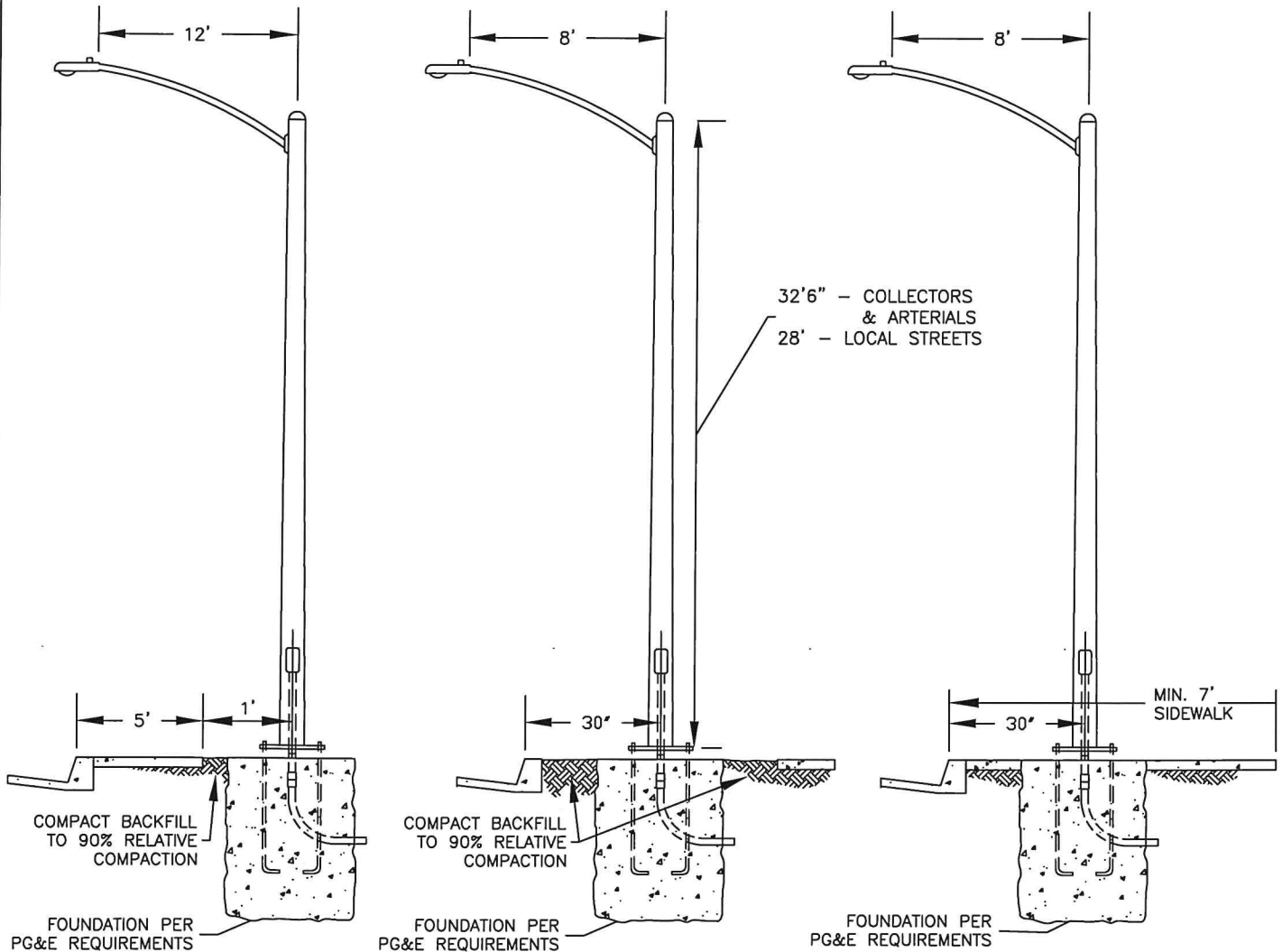
CGV

PUD

DRAWN BY: JA

SHEET 1 OF 1





**NOTE:**

INSTALLER TO VERIFY CURRENT PG&E STANDARDS.



# CITY OF CLOVIS

## STREET LIGHT LOCATIONS

DWG NO.

**ST-33**

REF.

N.A.

APPROVED BY:

*[Signature]*

CITY ENGINEER

DATE: 4/5/21

NO.

REVISED

BY

APPROVALS

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07-15-09

BGJ

CM

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03-31-16

CGV

2

08-13-20

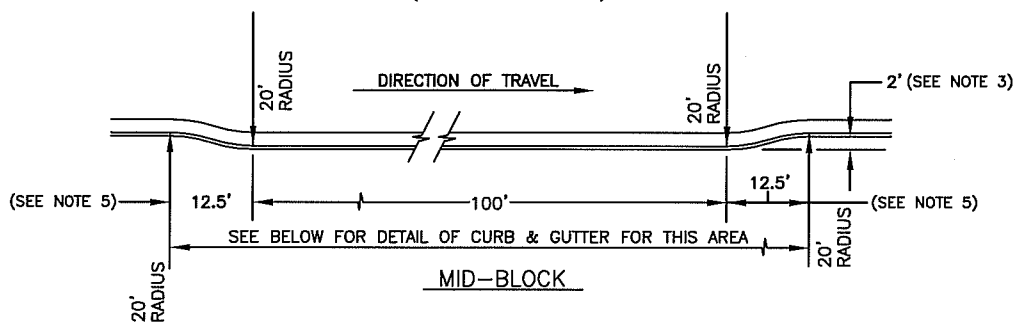
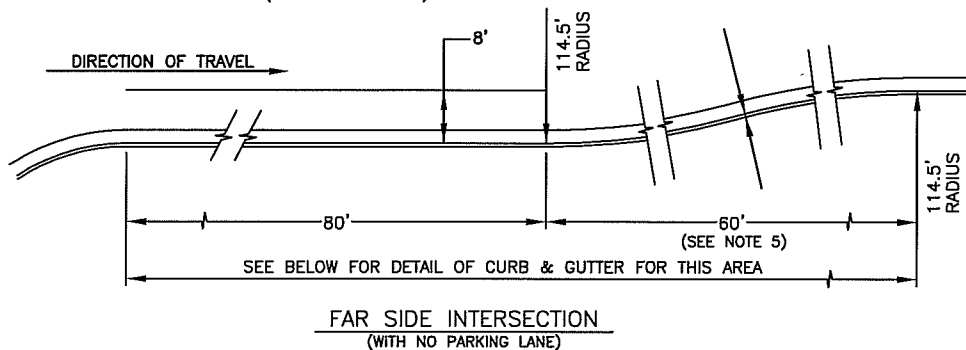
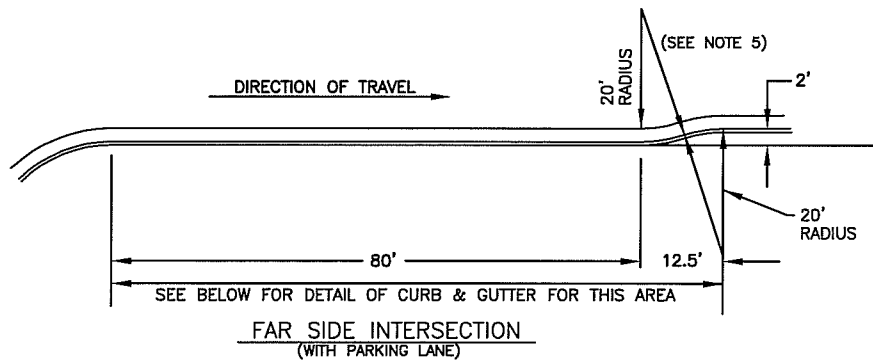
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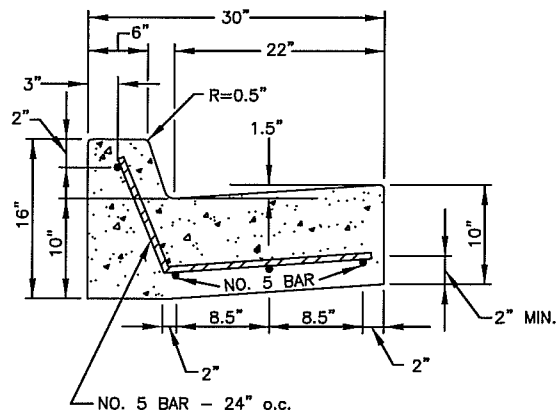
DRAWN BY: JA

SHEET 1 OF 1



#### NOTES:

1. 5' MIN. TRANSITION TO STANDARD CURB & GUTTER.
2. 20" LAP REQUIRED ON ALL BAR SPLICES.
3. WHERE PARKING LANE DOES NOT EXIST, 8' BUS BAY WILL BE REQUIRED.
4. CONCRETE SHALL BE CLASS 1.
5. IF 8' BUS BAY, USE 114.5' RADIUS AND 60' TRANSITION. CURB & GUTTER SUBGRADE COMPACTED TO 95%.



# CITY OF CLOVIS

## BUS BAYS

DWG NO.

**ST-35**

REF. STD.  
SPECIFICATIONS  
SECTION 73

SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1

APPROVED BY:

CITY ENGINEER

DATE:

NO.

REVISED

BY

APPROVALS

07-09-09

01-14-11

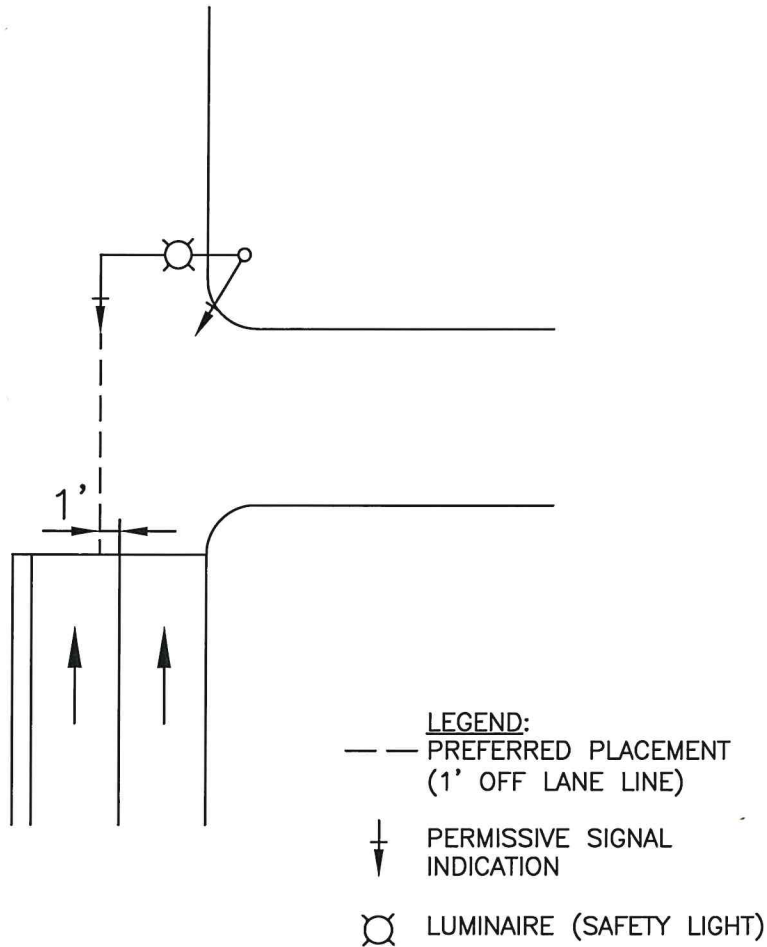
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BGJ


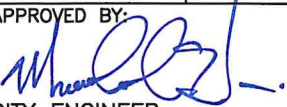
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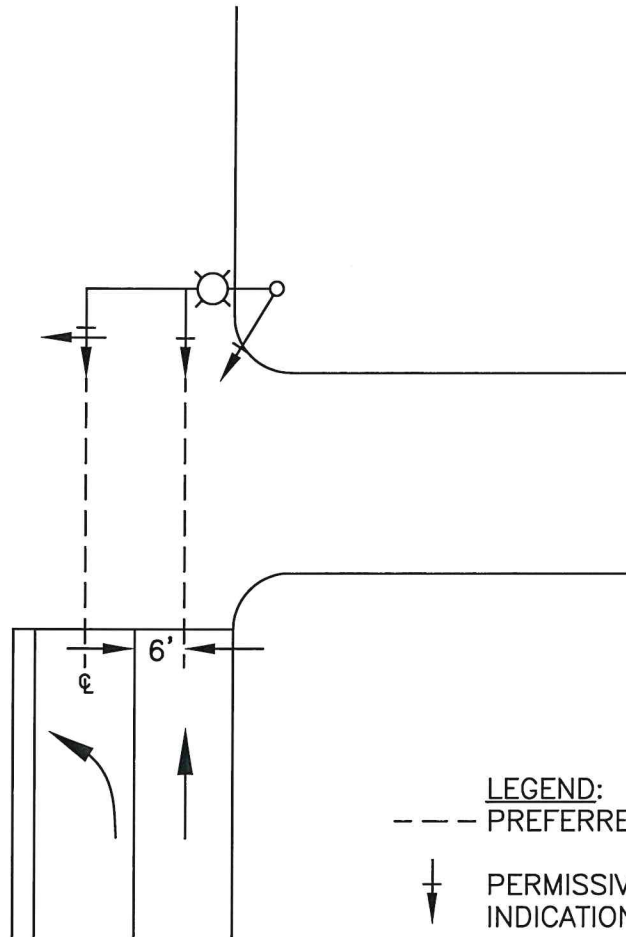
PUD



**NOTE:**  
 TRAFFIC ENGINEER SHALL DESIGN TRAFFIC SIGNAL LOCATION AND ORIENTATION BASED ON THE OPERATION AND SAFETY OF EACH INTERSECTION. THE DESIGN SHALL BE APPROVED BY THE CITY ENGINEER.

	<b>CITY OF CLOVIS</b>				DWG NO. <b>TS-1</b>
	TRAFFIC SIGNAL HEAD LOCATIONS 2 THROUGH LANES ONLY				REF.: STANDARD SPEC. SECTION 86
APPROVED BY:  CITY ENGINEER	NO.	REVISED	BY	APPROVALS	SCALE: NTS
		04-14-09	BGJ	CM	DRAWN BY: JA
		01-14-11	BGJ	DRU	
DATE: 5/19/2020	2	10-07-19	CGV	PUD	SHEET 1 OF 1





- LEGEND:**
- PREFERRED PLACEMENT
  - ↓ PERMISSIVE SIGNAL INDICATION
  - ←↓ PROTECTED LEFT-TURN SIGNAL INDICATION
  - ⊗ LUMINAIRE (SAFETY LIGHT)

**NOTE:**  
TRAFFIC ENGINEER SHALL DESIGN TRAFFIC SIGNAL LOCATION AND ORIENTATION BASED ON THE OPERATION AND SAFETY OF EACH INTERSECTION. THE DESIGN SHALL BE APPROVED BY THE CITY ENGINEER.

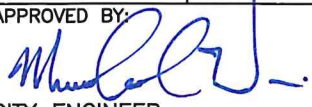



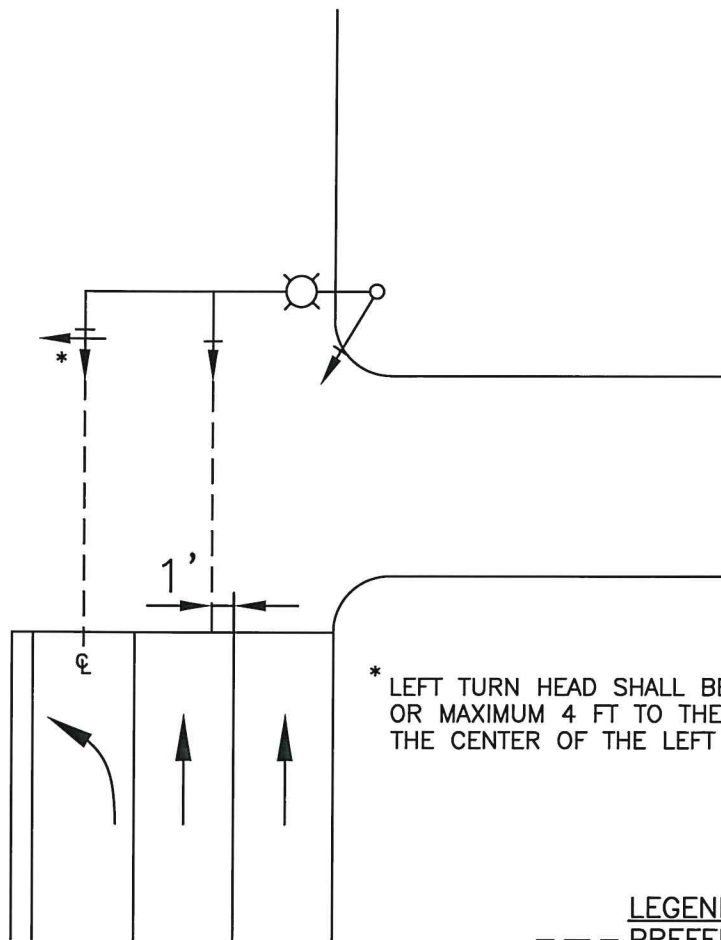
# CITY OF CLOVIS

DWG NO.  
**TS-1A**

TRAFFIC SIGNAL HEAD LOCATIONS  
1 THROUGH LANE AND SEPARATE PROTECTED LEFT TURN LANE

REF.:  
STANDARD SPEC.  
SECTION 86

APPROVED BY:  CITY ENGINEER DATE: 5/19/2020	NO.	REVISED	BY	APPROVALS	SCALE: NTS
		04-14-09	BGJ	CM	 DRU PUD
		01-14-11	BGJ		
		11-07-19	CGV		
					DRAWN BY: JA
					SHEET 1 OF 1



\* LEFT TURN HEAD SHALL BE AS SHOWN  
OR MAXIMUM 4 FT TO THE LEFT FROM  
THE CENTER OF THE LEFT TURN LANE.

- LEGEND:**
- PREFERRED PLACEMENT  
(1' OFF LANE LINE)
  - ↓ PERMISSIVE SIGNAL  
INDICATION
  - ← ⊥ PROTECTED LEFT-TURN  
SIGNAL INDICATION
  - ⊗ LUMINAIRE (SAFETY LIGHT)

**NOTE:**  
TRAFFIC ENGINEER SHALL DESIGN TRAFFIC SIGNAL LOCATION AND ORIENTATION  
BASED ON THE OPERATION AND SAFETY OF EACH INTERSECTION. THE DESIGN  
SHALL BE APPROVED BY THE CITY ENGINEER.

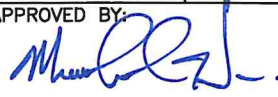
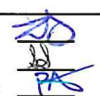


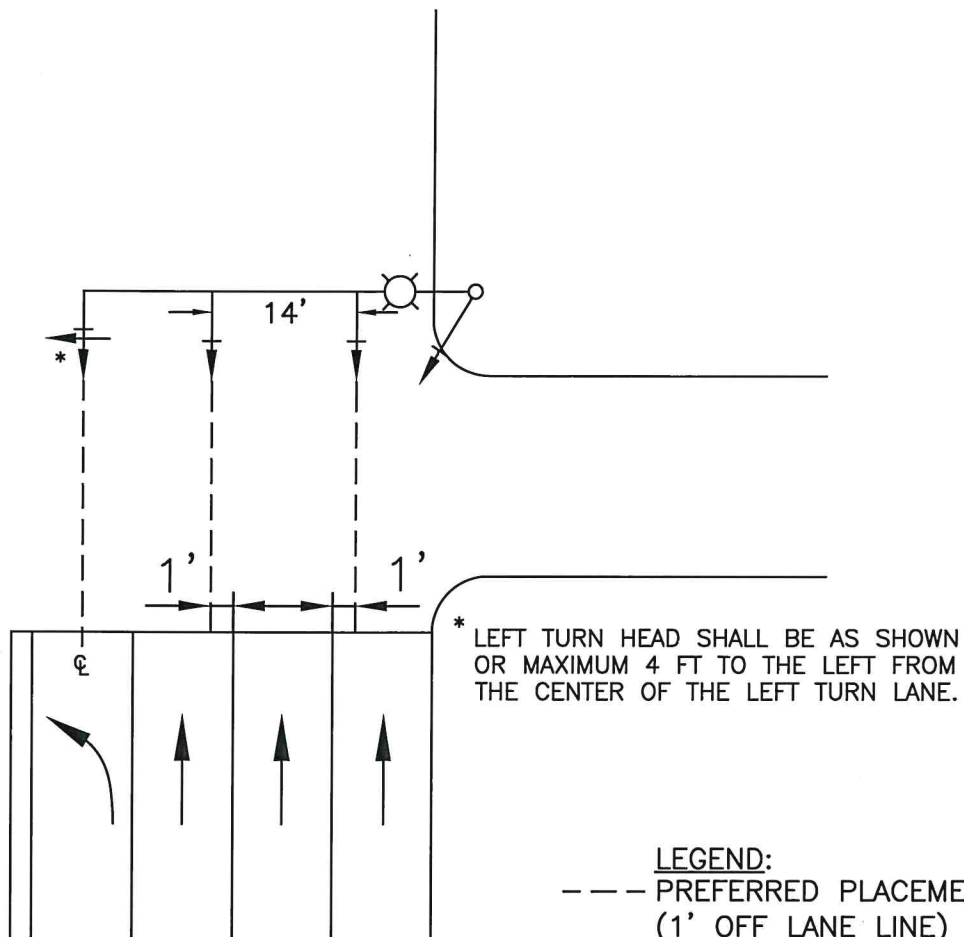
# CITY OF CLOVIS

DWG NO.  
**TS-1C**

## TRAFFIC SIGNAL HEAD LOCATIONS 2 THROUGH LANES WITH PROTECTED LEFT TURN LANE


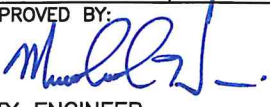



REF.:  
STANDARD SPEC.  
SECTION 86

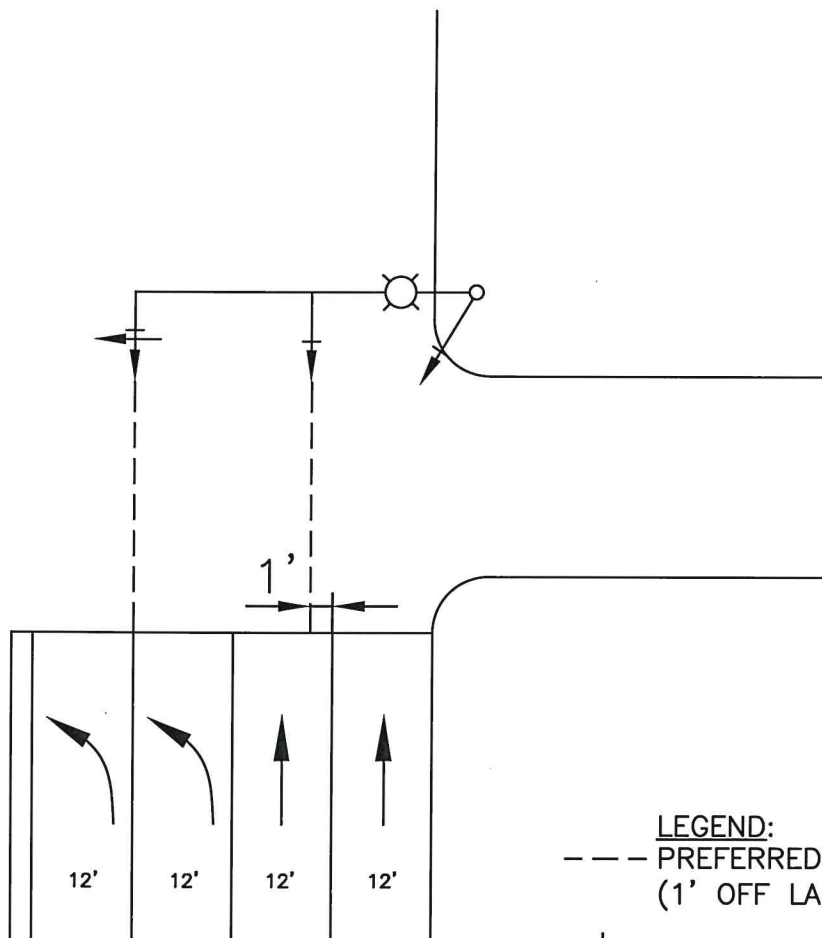
APPROVED BY:  CITY ENGINEER DATE: 5/19/2020	NO.	REVISED	BY	APPROVALS	SCALE: NTS
	2	04-14-09 01-14-11 10-07-19	BGJ BGJ CGV	CM DRU PUD 	DRAWN BY: JA SHEET 1 OF 1



- LEGEND:**
- PREFERRED PLACEMENT (1' OFF LANE LINE)
  - ⊥ PERMISSIVE SIGNAL INDICATION
  - ⊥ PROTECTED LEFT-TURN SIGNAL INDICATION
  - ⊙ LUMINAIRE (SAFETY LIGHT)






**NOTE:**  
TRAFFIC ENGINEER SHALL DESIGN TRAFFIC SIGNAL LOCATION AND ORIENTATION BASED ON THE OPERATION AND SAFETY OF EACH INTERSECTION. THE DESIGN SHALL BE APPROVED BY THE CITY ENGINEER.

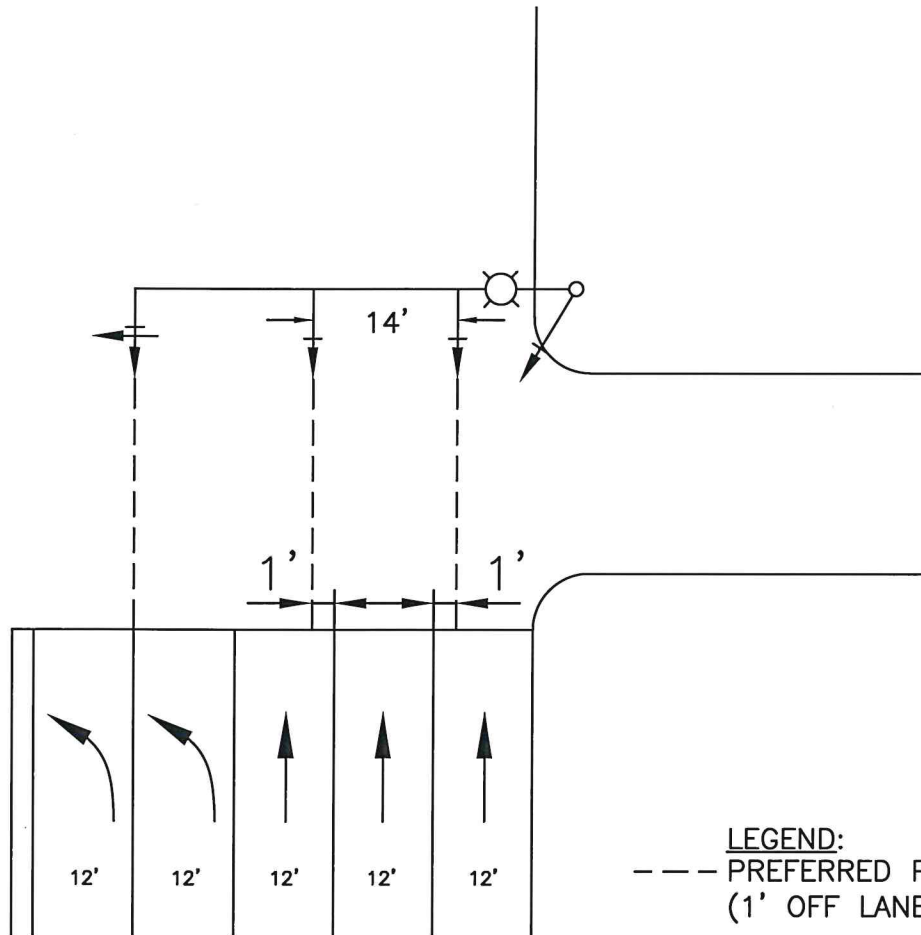
	CITY OF CLOVIS					DWG NO. <b>TS-1D</b>
	TRAFFIC SIGNAL HEAD LOCATIONS <b>3 THROUGH LANES WITH PROTECTED LEFT TURN LANE</b>					REF.: STANDARD SPEC. SECTION 86
APPROVED BY:  CITY ENGINEER DATE: <b>5/19/2020</b>	NO.	REVISED	BY	APPROVALS	SCALE: NTS	
	---	04-14-09	BGJ	CM 	DRAWN BY: JA	
	---	01-18-11	BGJ	DRU 	SHEET 1 OF 1	
	---	11-07-19	CGV	PUD 		



- LEGEND:**
- PREFERRED PLACEMENT (1' OFF LANE LINE)
  - ↓ PERMISSIVE SIGNAL INDICATION
  - ←↓ PROTECTED LEFT-TURN SIGNAL INDICATION
  - ⊗ LUMINAIRE (SAFETY LIGHT)

**NOTE:**  
TRAFFIC ENGINEER SHALL DESIGN TRAFFIC SIGNAL LOCATION AND ORIENTATION BASED ON THE OPERATION AND SAFETY OF EACH INTERSECTION. THE DESIGN SHALL BE APPROVED BY THE CITY ENGINEER.

	CITY OF CLOVIS				DWG NO. <b>TS-1E</b>
	TRAFFIC SIGNAL HEAD LOCATIONS 2 THROUGH LANES WITH 2 PROTECTED LEFT TURN LANES				REF.: STANDARD SPEC. SECTION 86
APPROVED BY:  CITY ENGINEER	NO.	REVISED	BY	APPROVALS	SCALE: NTS
		04-14-09	BGJ	CM	  
		01-18-11	BGJ	DRU	
DATE: 5/19/2020		11-07-19	CGV	PUD	
					DRAWN BY: JA
					SHEET 1 OF 1



- LEGEND:**
- PREFERRED PLACEMENT (1' OFF LANE LINE)
  - ↓ PERMISSIVE SIGNAL INDICATION
  - ⊥ PROTECTED LEFT-TURN SIGNAL INDICATION
  - ⊙ LUMINAIRE (SAFETY LIGHT)

**NOTE:**  
TRAFFIC ENGINEER SHALL DESIGN TRAFFIC SIGNAL LOCATION AND ORIENTATION BASED ON THE OPERATION AND SAFETY OF EACH INTERSECTION. THE DESIGN SHALL BE APPROVED BY THE CITY ENGINEER.



# CITY OF CLOVIS

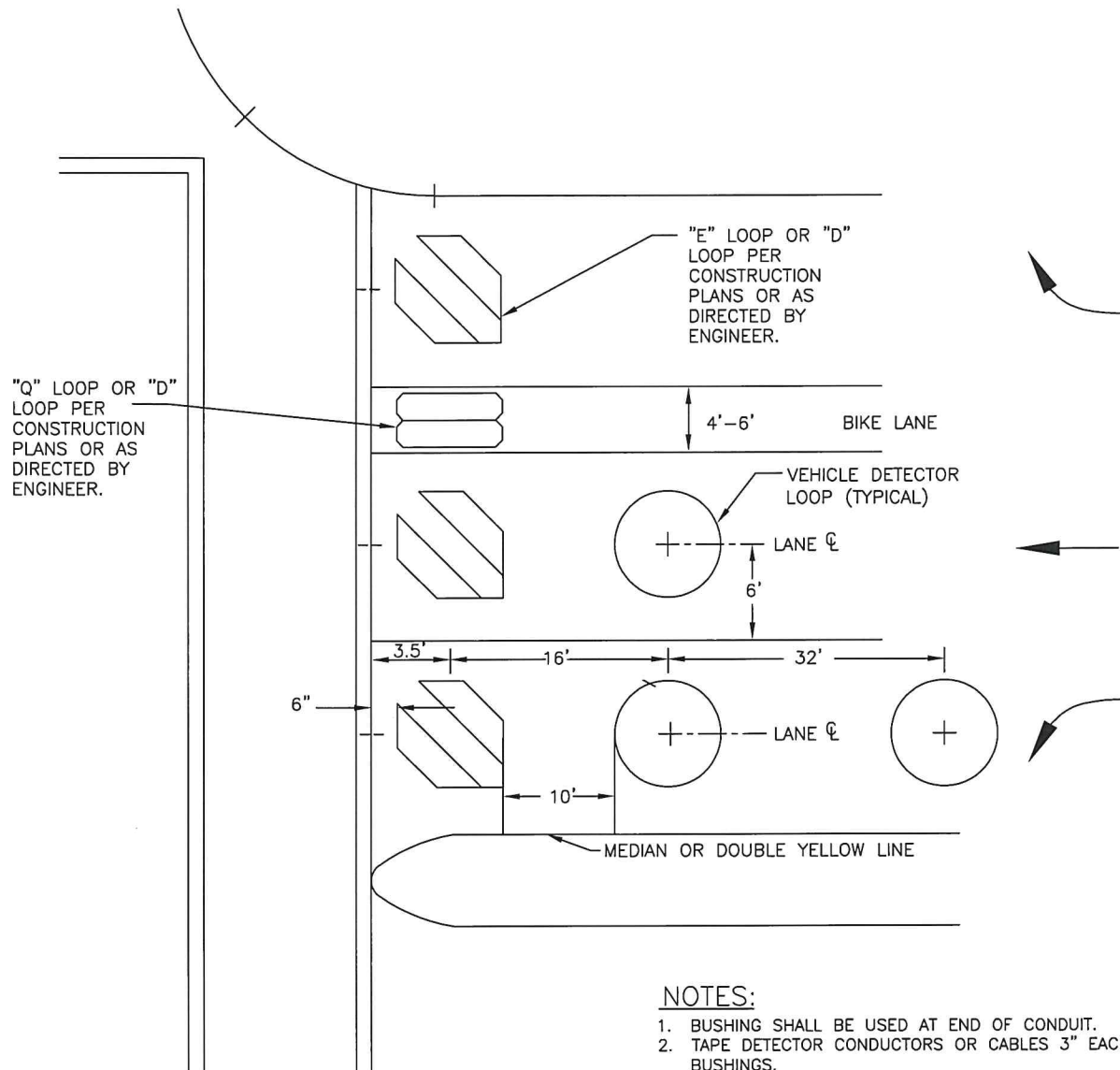
DWG NO.  
**TS-1F**

TRAFFIC SIGNAL HEAD LOCATIONS  
3 THROUGH LANES WITH 2 PROTECTED LEFT TURN LANES

REF.:  
STANDARD SPEC.  
SECTION 86

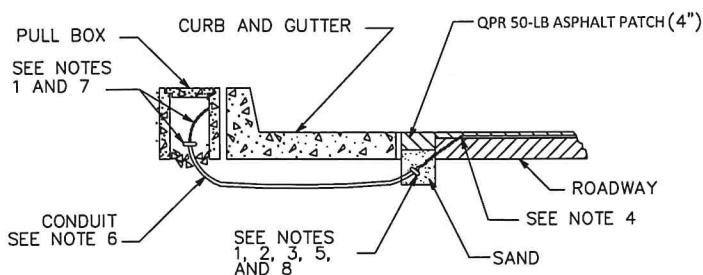
APPROVED BY:  CITY ENGINEER DATE: 5/19/2020	NO.	REVISED	BY	APPROVALS	SCALE: NTS
		04-14-09	BGJ	CM	  
		01-18-11	BGJ	DRU	
		11-07-19	CGV	PUD	
					DRAWN BY: JA
					SHEET 1 OF 1





#### NOTES:

- BUSHING SHALL BE USED AT END OF CONDUIT.
- TAPE DETECTOR CONDUCTORS OR CABLES 3" EACH SIDE OF BUSHINGS.
- INSTALL DUCT SEAL COMPOUND TO EACH END OF TERMINATION CONDUIT BEFORE INSTALLING HOT MIX ASPHALT.
- ROUND ALL SHARP EDGES WHERE DETECTOR CONDUCTORS OR CABLES HAVE TO PASS.
- END OF CONDUIT SHALL BE 3" BEYOND THE LIP OF GUTTER.
- | CONDUIT SIZE     | LOOP CONDUCTORS |
|------------------|-----------------|
| 1" C MINIMUM     | 1 TO 2 PAIRS    |
| 1 1/2" C MINIMUM | 3 TO 4 PAIRS    |
| 2" C MINIMUM     | 5 OR MORE PAIRS |
- SPLICE DETECTOR CONDUCTORS OR CABLES TO DETECTOR LEAD-IN-CABLE.
- KEEP LOOP WIRE IN SAND AREA TO PROTECT FROM QPR 50-LB ASPHALT PATCH.



CURB TERMINATION DETAIL



# CITY OF CLOVIS

## LOOP DETECTOR PLACEMENT

DWG NO.

**TS-2**

REF.:

STANDARD SPEC.  
SECTION 86

APPROVED BY:

CITY ENGINEER

DATE:

5/19/2020

NO.

REVISED

BY

APPROVALS

04-14-09

BGJ

CM

01-18-11

BGJ

DRU

10-07-19

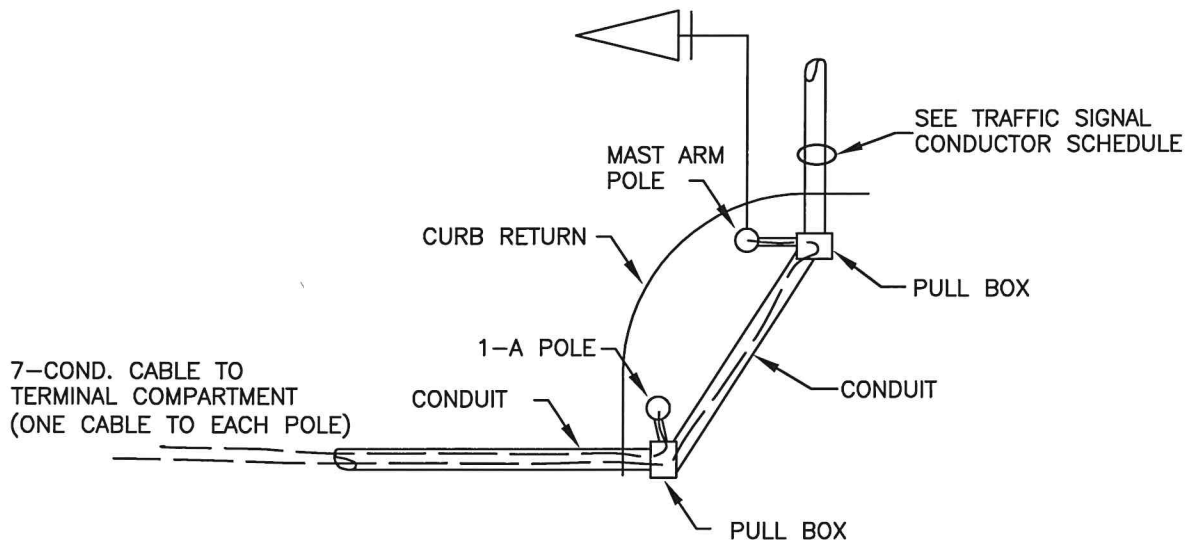
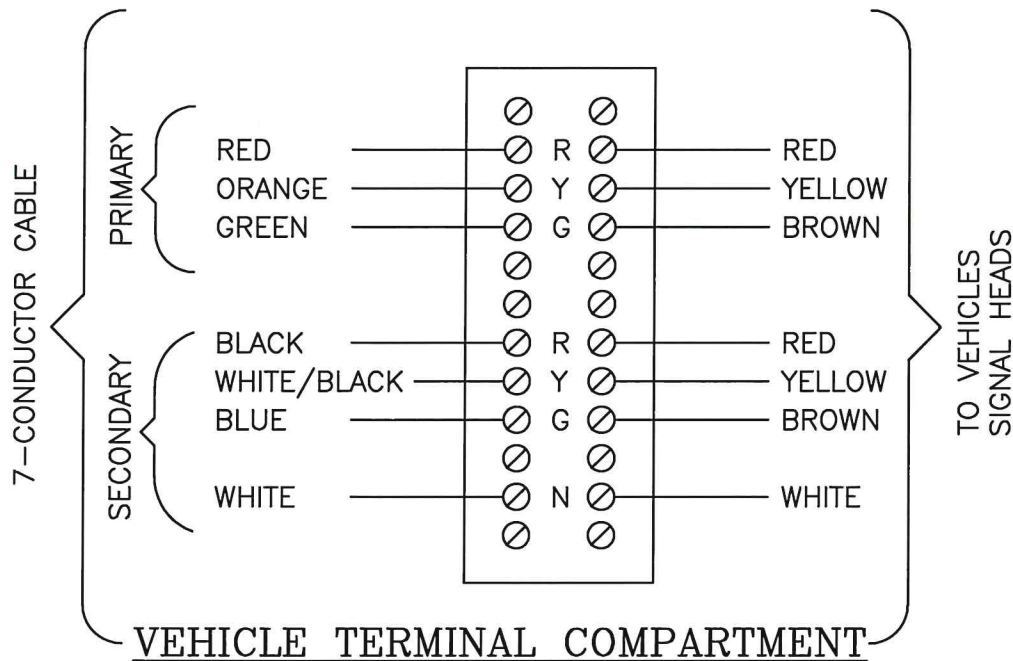
CGV

PUD

SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1



### TYPICAL CORNER CONNECTIONS

#### NOTES:

1. INSTALL SINGLE CONDUCTOR COLOR CODED #14 THWN COPPER WIRE BETWEEN TERMINAL STRIP AND EACH SIGNAL ASSEMBLY AND CONNECT.
2. THE CABLES THAT COMPRISE A SIGNAL PHASE SHALL HAVE AN IDENTIFICATION BAND PLACED NEAR THE END OF TERMINATION POINTS AND IN EVERY PULL BOX.  
THE IDENTIFICATION BAND SHALL BE A 3/8" PLASTIC STRIP AND INSTALLED WITH NON-FERROUS PERMANENT FASTENER. ALL CABLES SHALL BE LABELED PER PHASING SHOWN ON PLANS.
3. ALL CRIMP STYLE LUGS AND THE ENDS OF STRANDED CONDUCTORS SHALL BE SOLDERED.



# CITY OF CLOVIS

DWG NO.

## TS-4

## VEHICLE SIGNAL TERMINAL LOCATION

REF.:

STANDARD SPEC.  
SECTION 86

APPROVED BY:

CITY ENGINEER

DATE: 5/19/2020

NO.

REVISED

BY

APPROVALS

NO.

04-15-09

BGJ

CM

DRU

PUD

2

01-18-11

BGJ

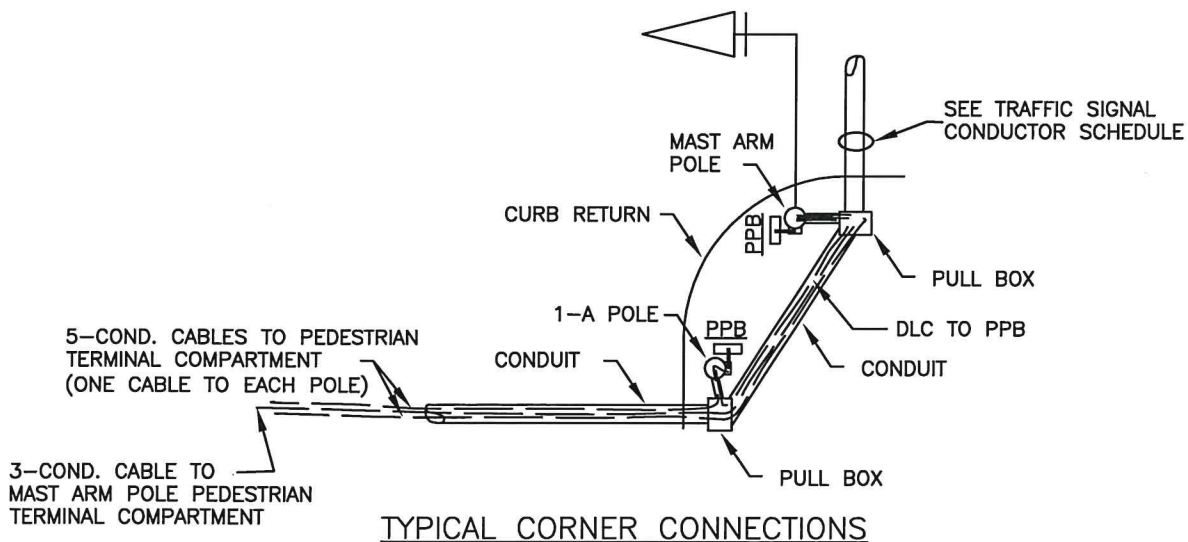
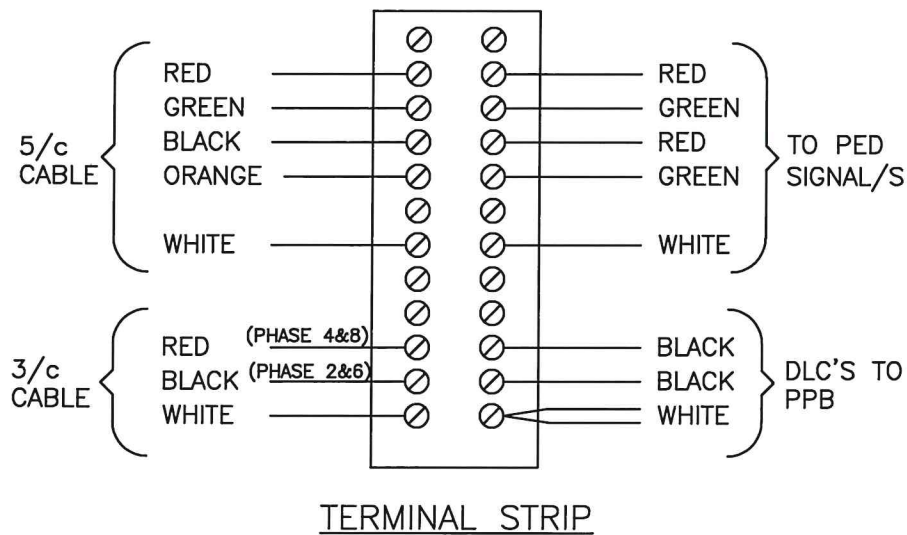
02-12-19

CGV

SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1



### NOTES:

1. INSTALL SINGLE CONDUCTOR COLOR CODED #14 THWN COPPER WIRE BETWEEN TERMINAL STRIP AND EACH SIGNAL ASSEMBLY AND CONNECT.
2. THE CABLES THAT COMPRISE A SIGNAL PHASE SHALL HAVE AN IDENTIFICATION BAND PLACED NEAR THE END OF TERMINATION POINTS AND IN EVERY PULL BOX. THE IDENTIFICATION BAND SHALL BE A 3/8" PLASTIC STRIP AND INSTALLED WITH NON-FERROUS PERMANENT FASTENER. ALL CABLES SHALL BE LABELED PER PHASING SHOWN ON PLANS.
3. ALL CRIMP STYLE LUGS AND THE ENDS OF STRANDED CONDUCTORS SHALL BE SOLDERED.



# CITY OF CLOVIS

## PEDESTRIAN SIGNAL TERMINAL LOCATIONS

DWG NO.

TS-4A

REF.:

STANDARD SPEC.  
SECTION 86

APPROVED BY:

CITY ENGINEER

DATE:

5/19/2020

NO.

REVISED

BY

APPROVALS

04-15-09

BGJ

CM

01-18-11

BGJ

DRU

12-02-19

CGV

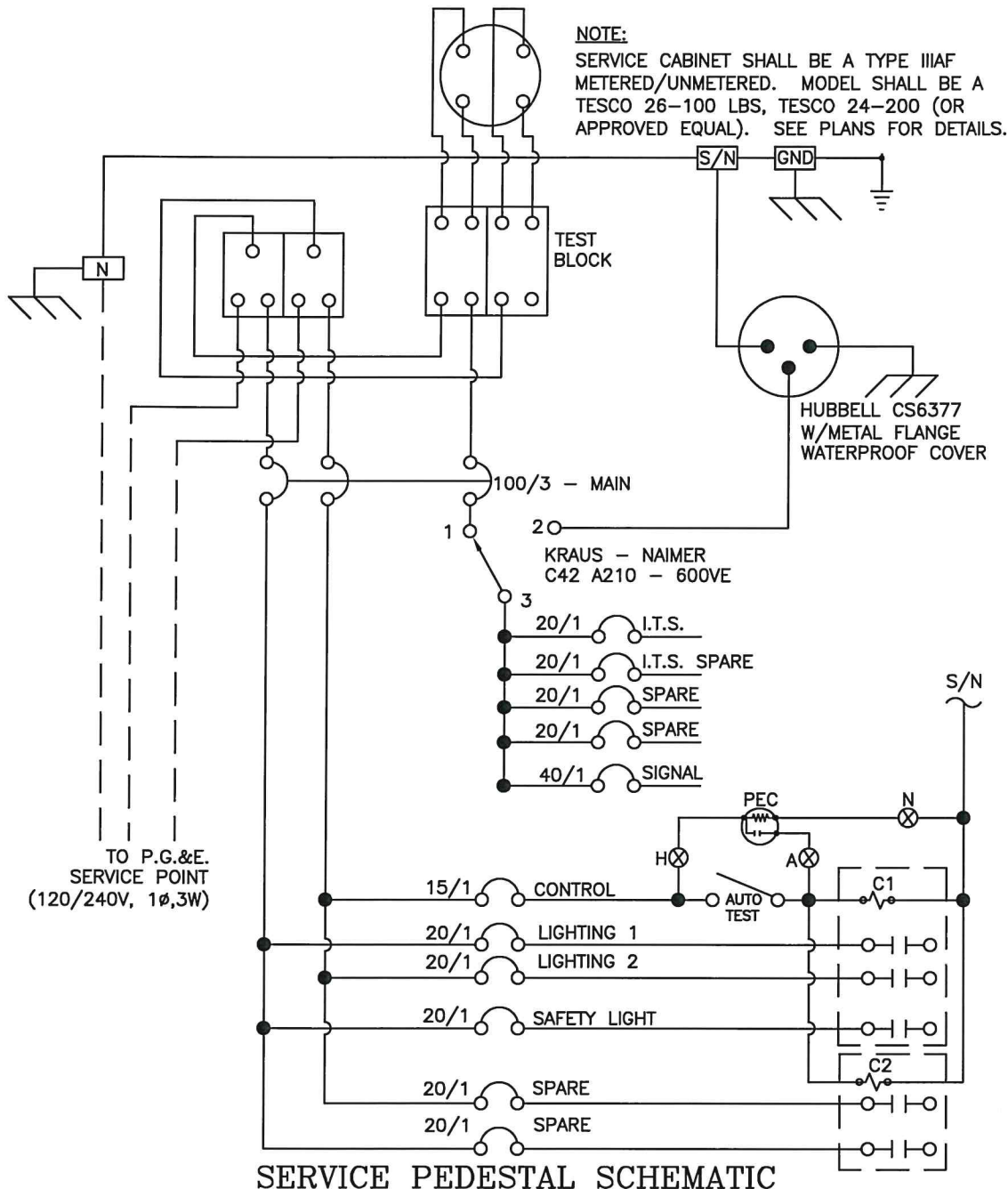
PUD

SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1





**SWITCH LOCATION**



# CITY OF CLOVIS

## SERVICE PEDESTAL SCHEMATIC

DWG NO.

**TS-5A**

REF.:

STANDARD SPEC.  
SECTION 86

APPROVED BY:

*[Signature]*  
CITY ENGINEER

DATE: 5/19/2020

NO.

REVISED

BY

APPROVALS

CM

DRU

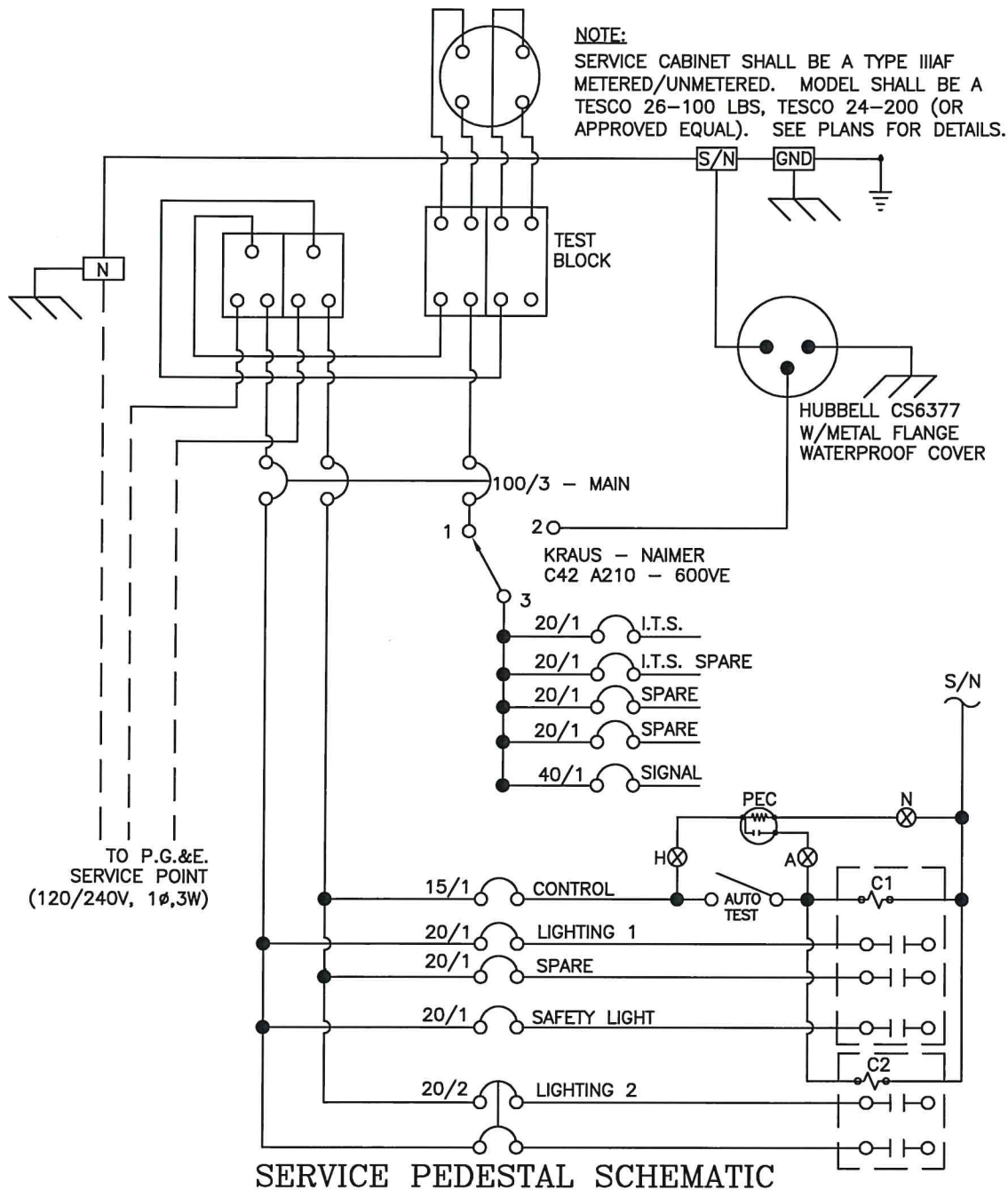
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*[Signature]*  
*[Signature]*

SCALE: NTS

DRAWN BY: CGV

SHEET 1 OF 1



20A	20A	20A	20A	15A	20A	20A	20A	20A	40A	100A
SPARE	SPARE	I.T.S. SPARE	I.T.S.	CONTROL	LIGHTING 1	SPARE	LIGHTING 2	SAFETY LIGHT	SIGNAL	MAIN

### SWITCH LOCATION



# CITY OF CLOVIS

DWG NO.

**TS-5B**

## SERVICE PEDESTAL SCHEMATIC

REF.:

STANDARD SPEC.  
SECTION 86

APPROVED BY:

CITY ENGINEER

DATE:

NO.

REVISED

BY

APPROVALS

CM

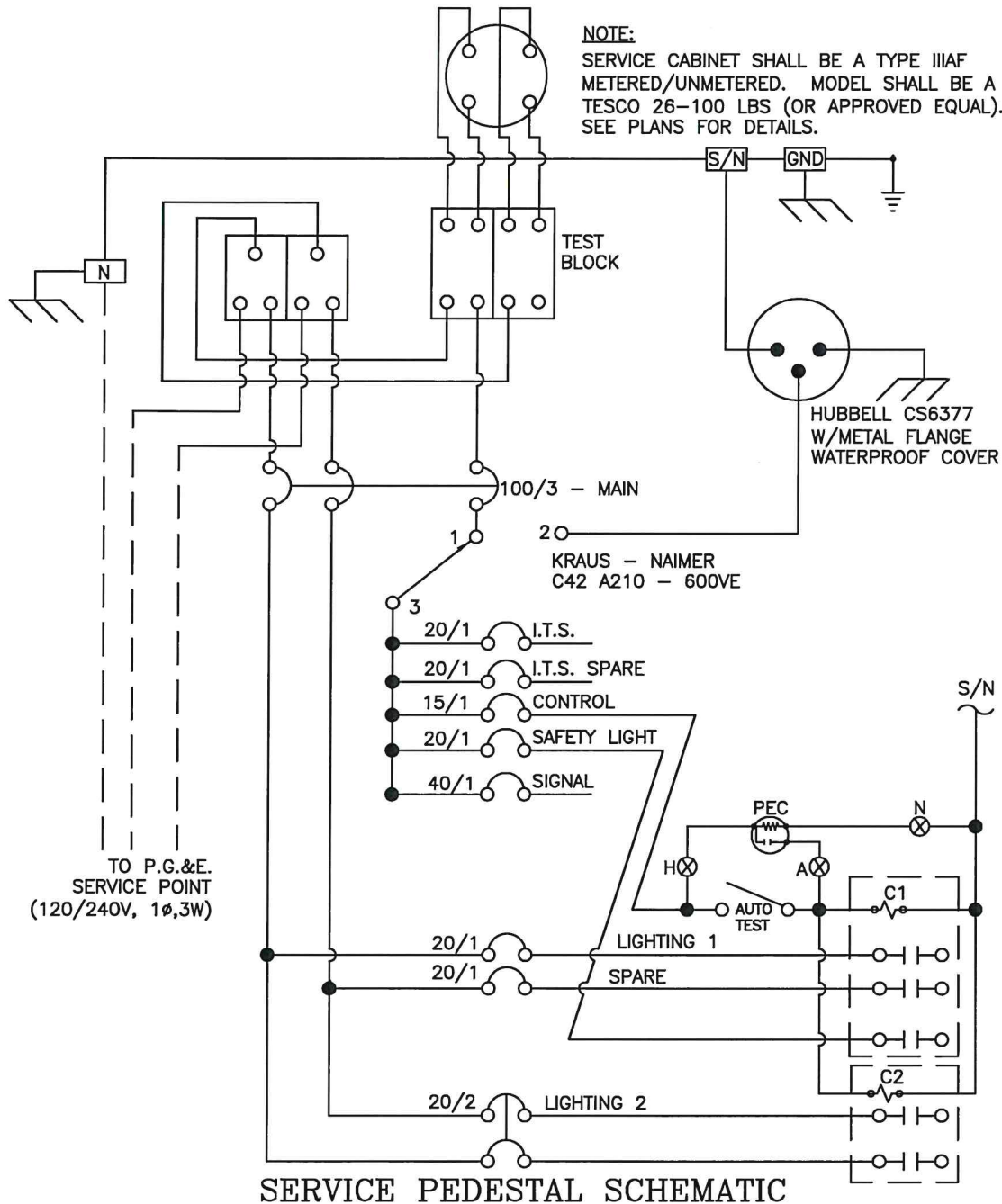
DRU

PUD

SCALE: NTS

DRAWN BY: CGV

SHEET 1 OF 1



SWITCH LOCATION



# CITY OF CLOVIS

DWG NO.  
**TS-5C**

## SERVICE PEDESTAL SCHEMATIC - METERED SAFETY LIGHT

REF.:  
STANDARD SPEC.  
SECTION 86

APPROVED BY:

CITY ENGINEER

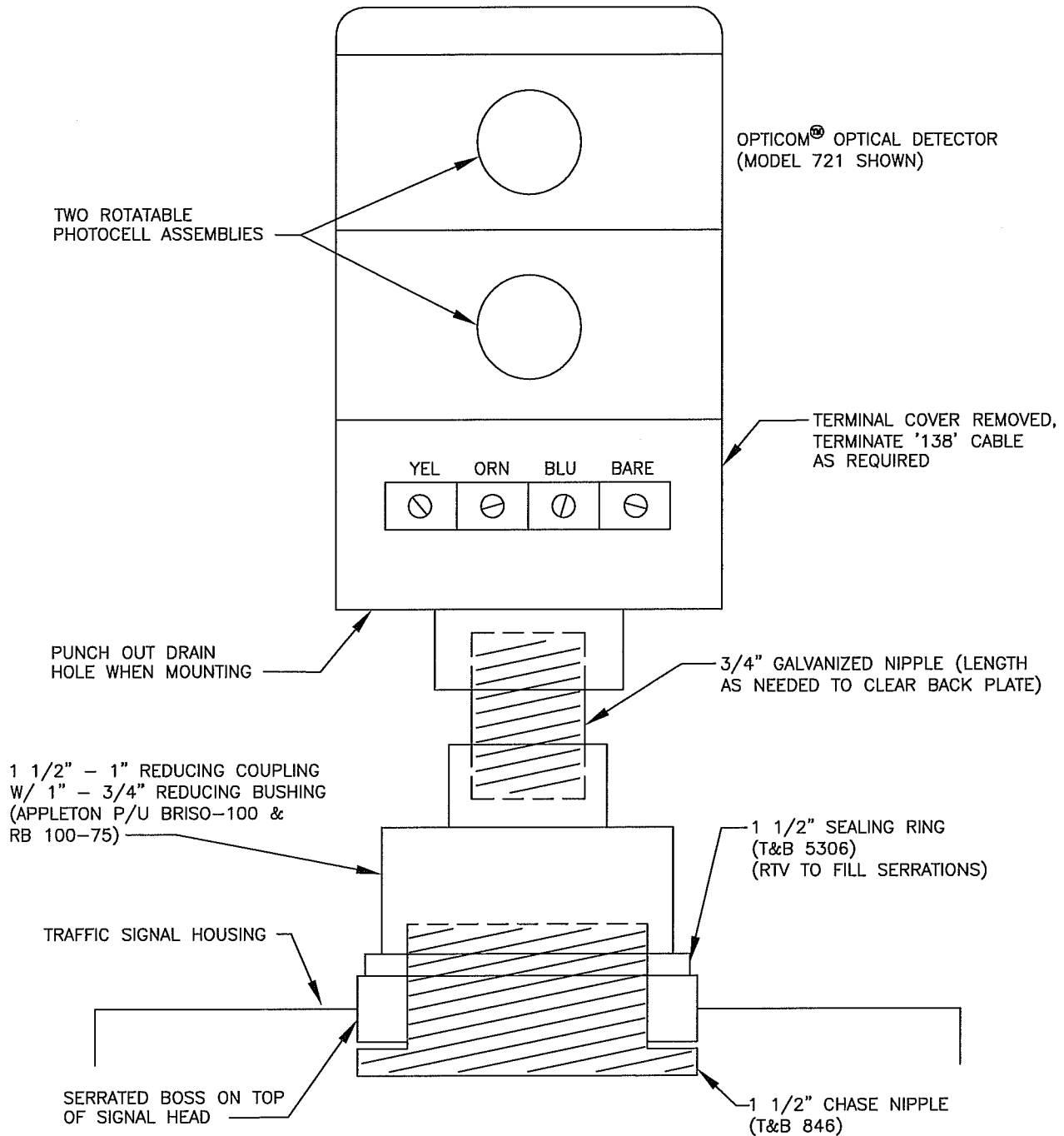
DATE:

NO.	REVISED	BY	APPROVALS
			CM
			DRU
			PUD

SCALE: NTS

DRAWN BY: CGV

SHEET 1 OF 1



# EMERGENCY VEHICLE DETECTOR MOUNTING ON TOP OF TRAFFIC SIGNAL UNIT

(SEE CALTRANS STANDARD DRAWING ES-4E AND  
CITY STD. DRW. TS-6C FOR MAST ARM MOUNTINGS)



## CITY OF CLOVIS

## OPTICOM™ DETECTOR ASSEMBLY

DWG NO.

### TS-6

REF.: STANDARD SPEC.  
SECTION 86

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

*7/29/11*

04-15-09

01-18-11

BGJ

BGJ

CM

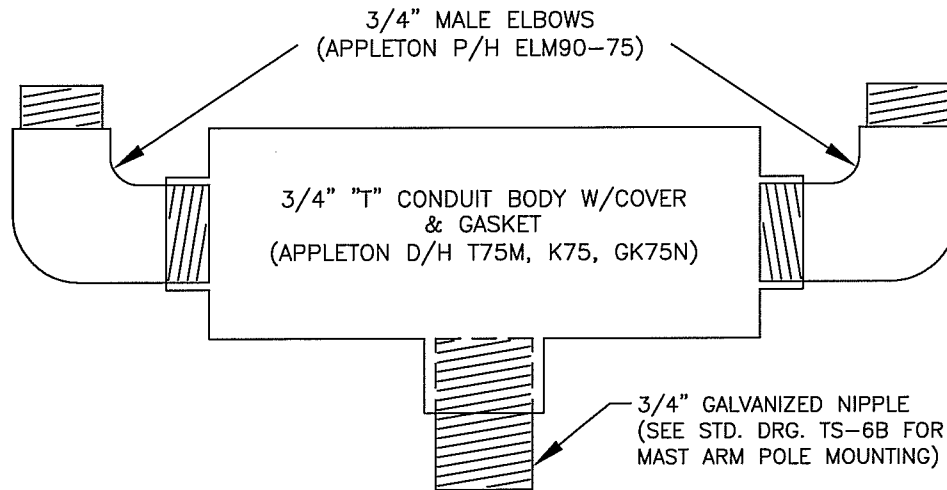
DRU

PUD

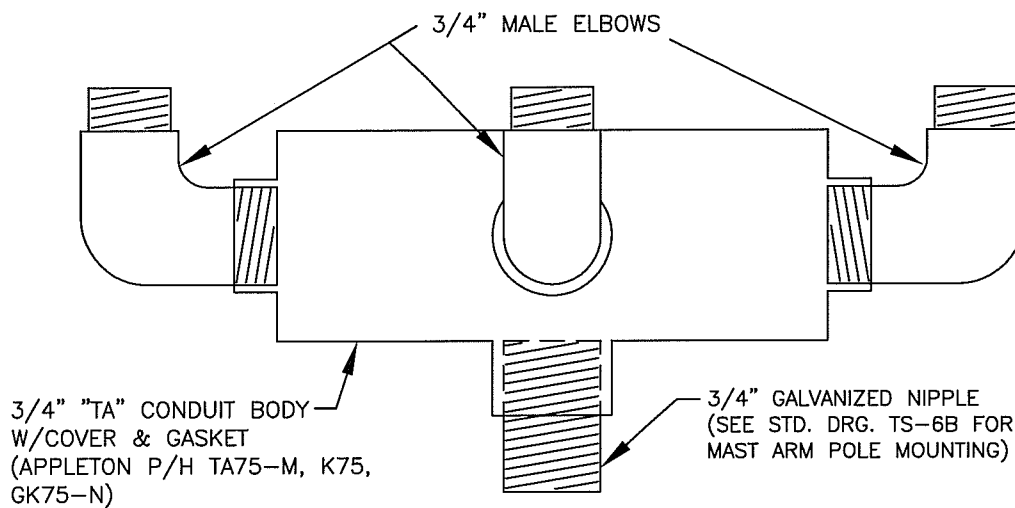
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DRAWN BY: JA

SHEET 1 OF 1



DUAL MOUNT



TRIPLE MOUNT



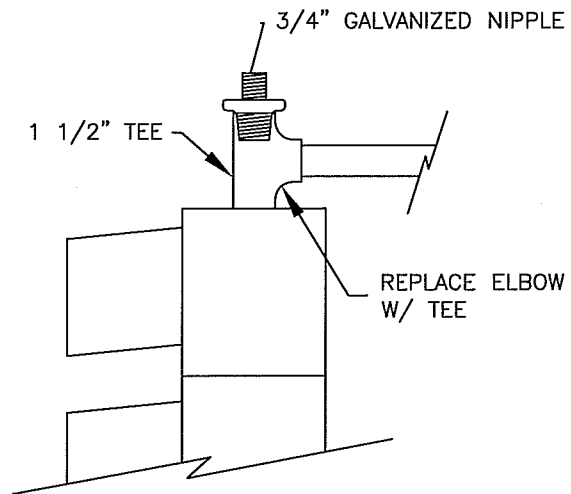
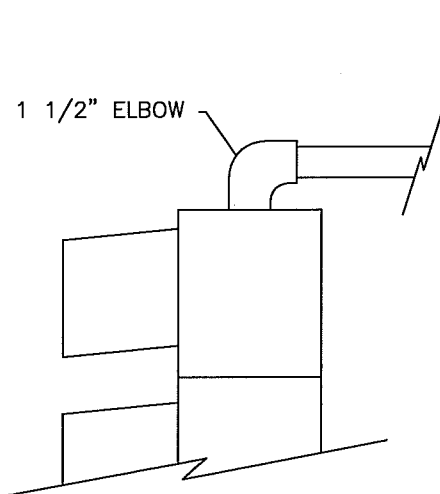
# CITY OF CLOVIS

DWG NO.  
**TS-6A**

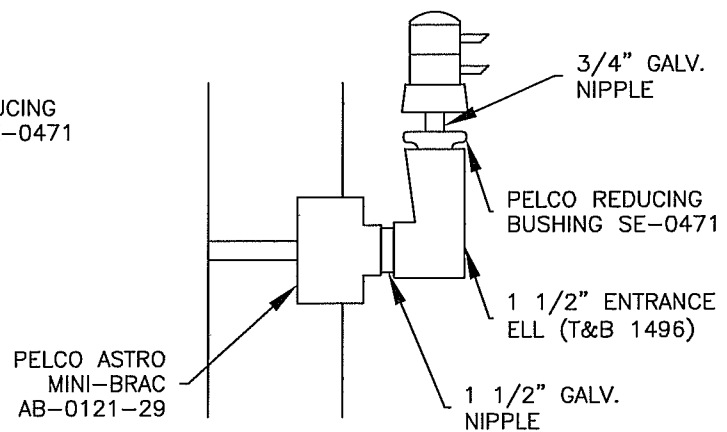
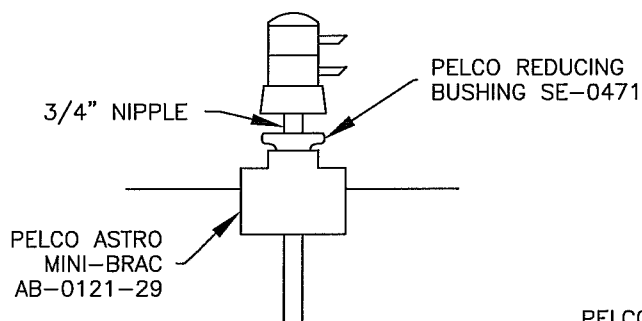
## OPTICOM<sup>™</sup> DUAL & TRIPLE MOUNTING FIXTURES

REF.:  
STANDARD SPEC.  
SECTION 86

APPROVED BY:	NO.		REVISED	BY	APPROVALS	SCALE: NTS
			04-15-09	BGJ		DRAWN BY: JA
			01-18-11	BGJ		SHEET 1 OF 1
			02-16-11	BGJ		
CITY ENGINEER					CM DRU PUD	
DATE:						



## FRAMEWORK MOUNTING



## ARM/POLE MOUNTING



# CITY OF CLOVIS

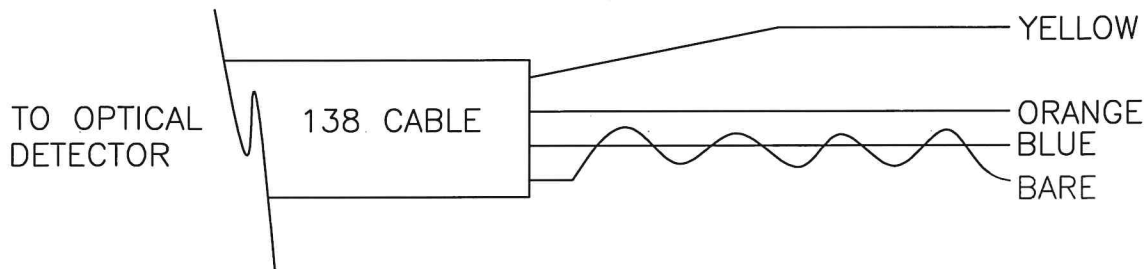
## OPTICOM<sup>®</sup> MISC. MOUNTING FIXTURES

DWG NO.  
**TS-6B**

REF.:  
STANDARD SPEC.  
SECTION 86

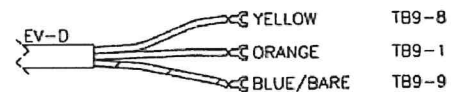
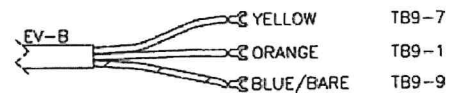
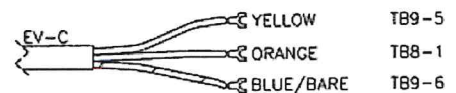
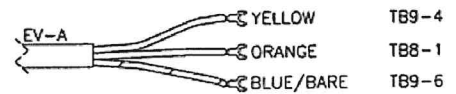
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CITY ENGINEER		04-16-09	BGJ	CM	DRAWN BY: JA
DATE: 4/29/11		01-18-11	BGJ	DRU	SHEET 1 OF 1
				PUD	





YELLOW DET OUT  
ORANGE 24V

BLUE }  
BARE } GROUND



332L CABINET

NOTE:

IF DETECTOR IS INSTALLED AND CABLE CANNOT BE CONNECTED TO AN ACTIVE (POWER-ON) DISCRIMINATOR, ALL 4 LEADS SHOULD BE TIED TO EARTH GROUND TO PREVENT TRANSIENT DAMAGE TO DETECTOR.



**CITY OF CLOVIS**

**OPTICOM<sup>TM</sup> 138 CABLE**

DWG NO.  
**TS-6C**

REF.:  
STANDARD SPEC.  
SECTION 86

APPROVED BY:

CITY ENGINEER

DATE: 6-15-2020

NO.

REVISED

BY

APPROVALS

04-16-09

BGJ

CM

DRU

PUD

01-18-11

BGJ

02-12-20

CGV

SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1

FIG. "A": '138' CABLE TERMINATIONS

	PRIMARY DETECTORS			#1 AUX. DETECTOR			#2 AUX. DETECTOR		
	YEL	ORN	BLU	YEL	ORN	BLU	YEL	ORN	BLU
EVA	4	2	6	2	1	6	3	1	6
EVB	7	3	9	4	7	12	5	7	12
EVC	5	2	6	8	1	6	9	1	6
EVD	8	3	9	10	7	12	11	7	12
	TB 9			TB A					
	332 CABINET								

FIG "B": CONVENTIONAL PHASE ASSIGNMENTS

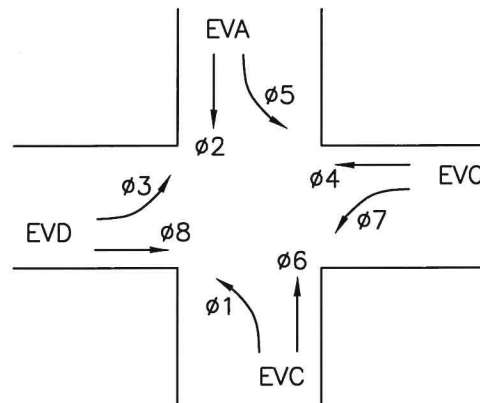
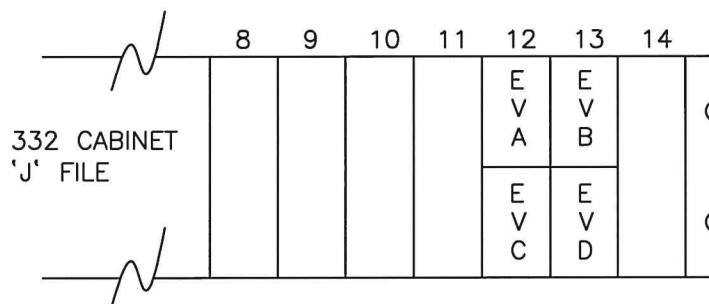


FIG. "C": CONVENTIONAL INPUT FILE ASSIGNMENTS



# CITY OF CLOVIS

## OPTICOM<sup>TM</sup> DETECTOR ASSIGNMENTS

DWG NO.  
**TS-6D**

REF.:  
STANDARD SPEC.  
SECTION 86

APPROVED BY:

CITY ENGINEER

DATE: 6-15-2020

NO.

REVISED

BY

APPROVALS

04-16-09

01-18-11

02-12-20

BGJ

BGJ

CGV

CM

DRU

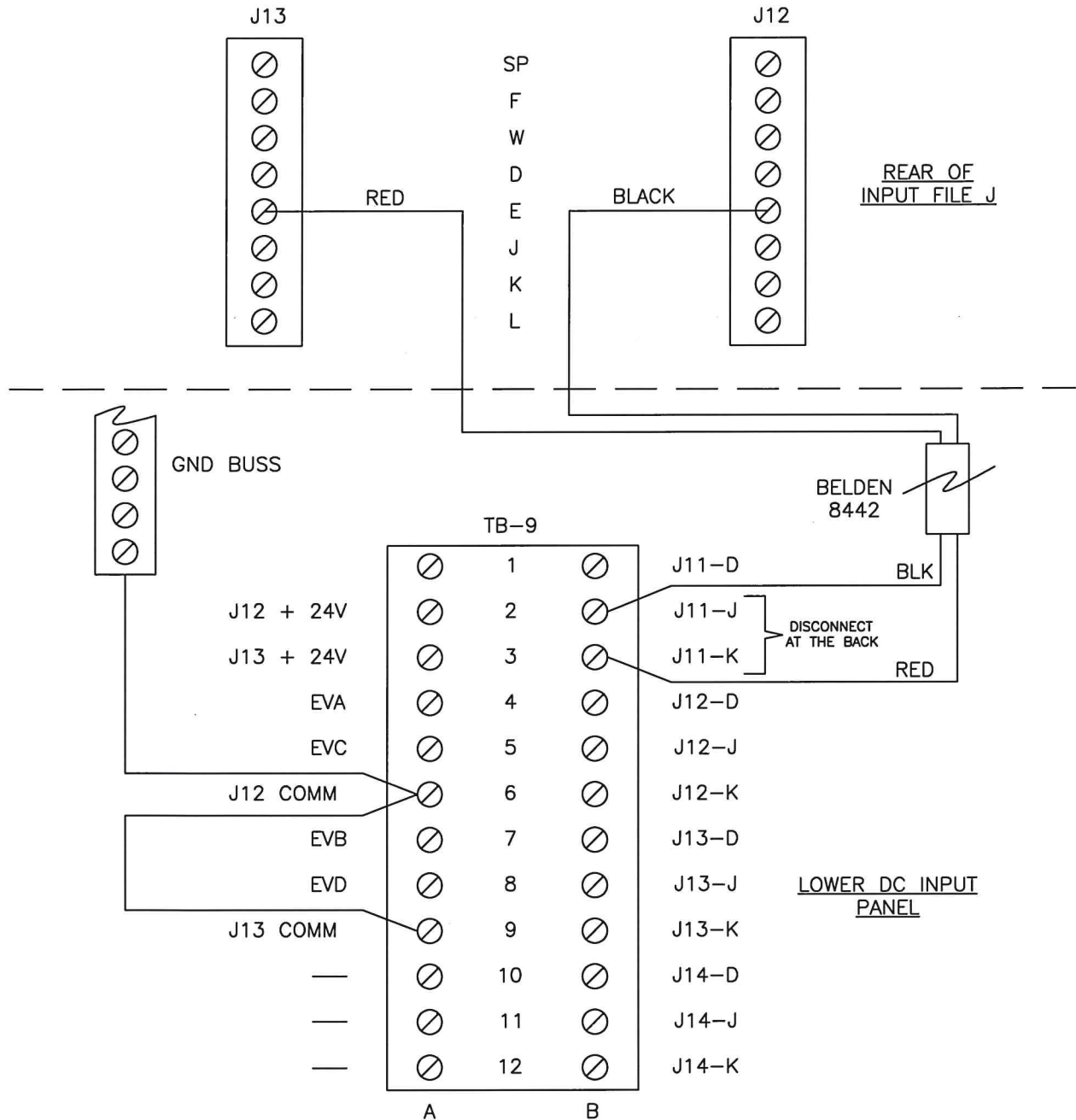
PUD

SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1





MODIFY EXISTING WIRING AS ABOVE



# CITY OF CLOVIS

OPTICOM® WIRING MODIFICATIONS TERMINAL  
BLOCK CONTROLLER (332 CABINET)

DWG NO.

TS-6E

REF.:

STANDARD SPEC.  
SECTION 86

APPROVED BY:

CITY ENGINEER

DATE: 6-15-2020

NO.

REVISED

BY

APPROVALS

SCALE: NTS

04-16-09

BGJ

CM

DRU

PUD

01-18-11

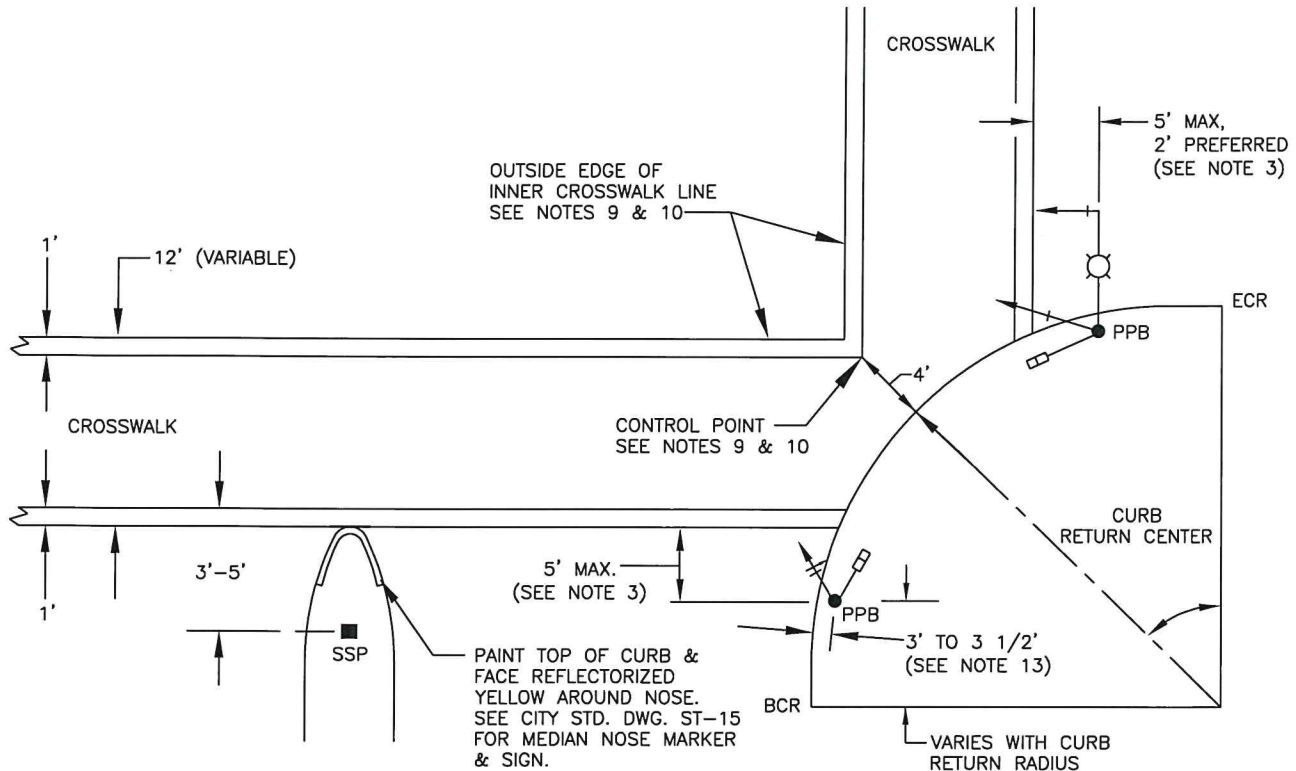
BGJ

02-12-20

CGV

DRAWN BY: JA

SHEET 1 OF 1



#### NOTES:

1. PEDESTRIAN PUSH BUTTONS ON SEPARATE POSTS WHERE REQUIRED. PPB SHALL BE MOUNTED ON "PEDESTRIAN PUSH BUTTON POST" PER CALTRANS STD. DWG. ES-7A. DO NOT USE "COMBINED" POST UNLESS SPECIFIED.
2. SEE CITY STD. DWG. ST-15 FOR MEDIAN NOSE MARKER & SIGN FOR DETAILS.
3. SIGNAL STANDARD SHALL BE USED FOR PEDESTRIAN PUSH BUTTONS WITHIN 5 FEET FROM THE CROSSWALK AREA. IF STANDARD IS MORE THAN 5 FEET FROM A CROSSWALK, THE ENGINEER MAY REQUIRE A PPB POST BE INSTALLED AS SHOWN ON PLANS.
4. PEDESTRIAN PUSH BUTTONS SHALL BE PLACED ON CROSSWALK SIDE OF STANDARD OR POST.
5. CROSSWALK AREA OF THE SIDEWALK SHOULD BE KEPT CLEAR OF POLES.
6. WHERE CURB RETURN RADIUS EXCEEDS 10 FEET, SIGNAL FACES SHOULD BE "SPLIT" OR LOCATED ON SEPARATE STANDARDS SO THAT GOOD VISIBILITY OF RIGHT AND FAR LEFT SIGNALS ARE PROVIDED FOR ALL APPROACHES.
7. STRIPING MAY VARY WHERE WHEELCHAIR RAMPS ARE PROVIDED.
8. MAINTAIN A MINIMUM CLEAR SIDEWALK WIDTH OF 48 INCHES FOR WHEELCHAIRS.
9. CURB RETURNS WITH A RADIUS OF LESS THAN 15 FEET: LINE UP OUTSIDE EDGE OF INNER CROSSWALK LINE WITH FACE OF CURB, SEE DRAWING.
10. CURB RETURNS WITH A RADIUS OF 15 FEET OR MORE: LOCATE CENTER OF CURB RETURN. MEASURE 4 FEET TOWARDS CENTER OF INTERSECTION TO LOCATE CONTROL POINT. LINE UP THE CROSSWALK WITH THE CONTROL POINT AS INDICATED ABOVE.
11. SEE MEDIAN ISLAND TURNOUT STANDARDS FOR MEDIAN CONCRETE CAP.
12. REFER TO CITY STD. DWG. ST-11 FOR CONSTRUCTION OF CURB RAMP.
13. WHERE 100 MPH WINDLOAD POLES ARE INSTALLED, USE 3 1/2'.

#### LEGEND:

- ← ○ VEHICLE SIGNAL HEAD
- ← ○ VEHICLE SIGNAL HEAD WITH BACKPLATE
- ← + ○ VEHICLE SIGNAL HEAD WITH ARROWS
- ○ PEDESTRIAN SIGNAL HEAD
- LUMINAIRE
- PPB PEDESTRIAN PUSH BUTTON
- PPB ON POST
- SSP STREET SIGN POST



# CITY OF CLOVIS

DWG NO.

TS-7

## TRAFFIC SIGNAL INSTALLATION

REF.: STD. SPECIFICATIONS

APPROVED BY:

CITY ENGINEER

DATE:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

12-29-11

BGJ

CM

DRU

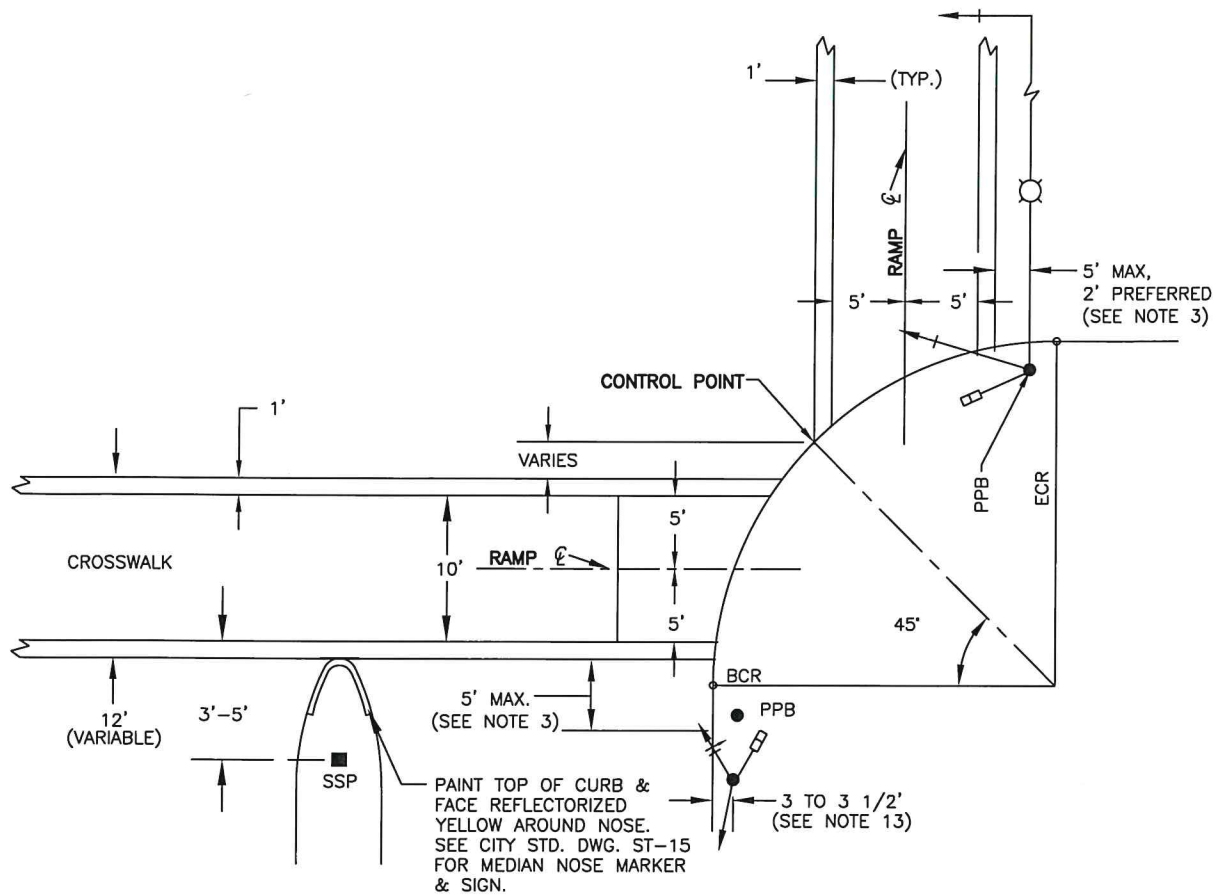
PUD

12-02-19

CGV

DRAWN BY: JA

SHEET 1 OF 1



#### NOTES:

1. PEDESTRIAN PUSH BUTTONS ON SEPARATE POSTS WHERE REQUIRED. PPB SHALL BE MOUNTED ON "PEDESTRIAN PUSH BUTTON POST" PER CALTRANS STD. DWG. ES-7A. DO NOT USE "COMBINED" POST UNLESS SPECIFIED.
2. SEE CITY STD. DWG. ST-15 FOR MEDIAN NOSE MARKER & SIGN FOR DETAILS.
3. SIGNAL STANDARD SHALL BE USED FOR PEDESTRIAN PUSH BUTTONS WITHIN 5 FEET FROM THE CROSSWALK AREA. IF STANDARD IS MORE THAN 5 FEET FROM A CROSSWALK, THE ENGINEER MAY REQUIRE A PPB POST BE INSTALLED AS SHOWN ON PLANS.
4. PEDESTRIAN PUSH BUTTONS SHALL BE PLACED ON CROSSWALK SIDE OF STANDARD OR POST.
5. CROSSWALK AREA OF THE SIDEWALK SHOULD BE KEPT CLEAR OF POLES.
6. WHERE CURB RETURN RADIUS EXCEEDS 10 FEET, SIGNAL FACES SHOULD BE "SPLIT" OR LOCATED ON SEPARATE STANDARDS SO THAT GOOD VISIBILITY OF RIGHT AND FAR LEFT SIGNALS ARE PROVIDED FOR ALL APPROACHES.
7. STRIPING MAY VARY WHERE WHEELCHAIR RAMP ARE PROVIDED.
8. MAINTAIN A MINIMUM CLEAR SIDEWALK WIDTH OF 48 INCHES FOR WHEELCHAIRS.
9. CURB RETURNS WITH A RADIUS OF LESS THAN 15 FEET: LINE UP OUTSIDE EDGE OF INNER CROSSWALK LINE WITH FACE OF CURB, SEE DRAWING.
10. CURB RETURNS WITH A RADIUS OF 15 FEET OR MORE: LOCATE CENTER OF CURB RETURN. MEASURE 4 FEET TOWARDS CENTER OF INTERSECTION TO LOCATE CONTROL POINT. LINE UP THE CROSSWALK WITH THE CONTROL POINT AS INDICATED ABOVE.
11. SEE MEDIAN ISLAND TURNOUT STANDARDS FOR MEDIAN CONCRETE CAP.
12. REFER TO CITY STD. DWG. ST-11 FOR CONSTRUCTION OF CURB RAMP.
13. WHERE 100 MPH WINDLOAD POLES ARE INSTALLED, USE 3 1/2'.

#### LEGEND:

- ←○ VEHICLE SIGNAL HEAD
- ←+○ VEHICLE SIGNAL HEAD WITH BACKPLATE
- ←++○ VEHICLE SIGNAL HEAD WITH ARROWS
- PEDESTRIAN SIGNAL HEAD
- LUMINAIRE
- PPB PEDESTRIAN PUSH BUTTON
- PPB ON POST
- SSP STREET SIGN POST



# CITY OF CLOVIS

DWG NO.

**TS-7A**

## TRAFFIC SIGNAL INSTALLATION

DUAL RAMP DESIGN

REF.:

STANDARD SPEC.  
SECTION 86

APPROVED BY:

CITY ENGINEER

DATE:

5/19/2020

NO.

REVISED

BY

APPROVALS

04-20-09

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01-18-11

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02-16-11

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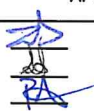
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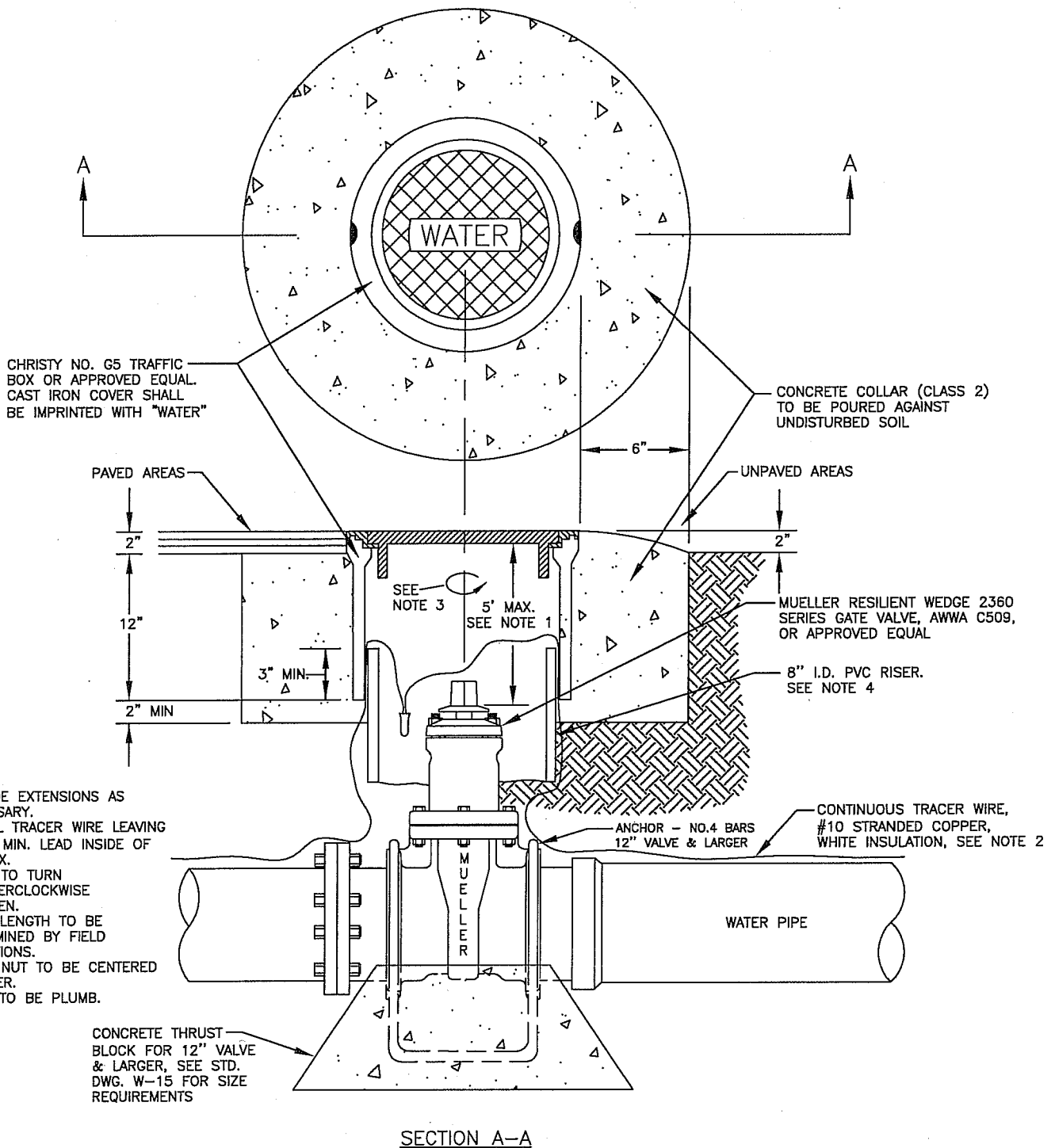
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SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1



#### NOTES

1. PROVIDE EXTENSIONS AS NECESSARY.
2. INSTALL TRACER WIRE LEAVING A 12" MIN. LEAD INSIDE OF G5 BOX.
3. VALVE TO TURN COUNTERCLOCKWISE TO OPEN.
4. RISER LENGTH TO BE DETERMINED BY FIELD CONDITIONS.
5. VALVE NUT TO BE CENTERED IN RISER.
6. RISER TO BE PLUMB.



# CITY OF CLOVIS

## WATER VALVE

DWG NO.

W-1

REF. STD. SPECIFICATIONS  
SECTION 66

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

11-23-09

07-28-09

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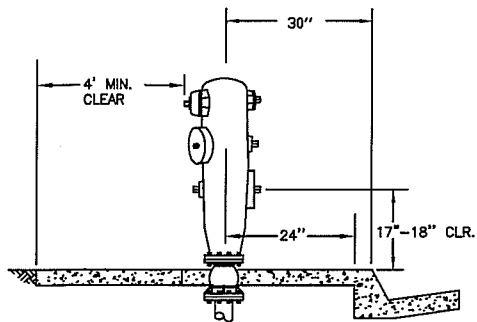
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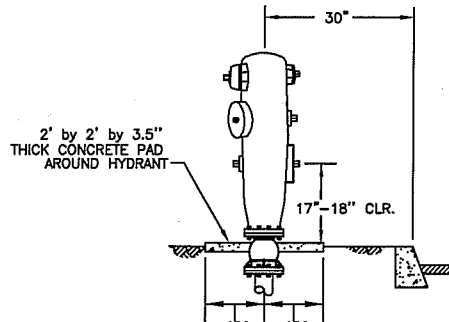


FIRE 65

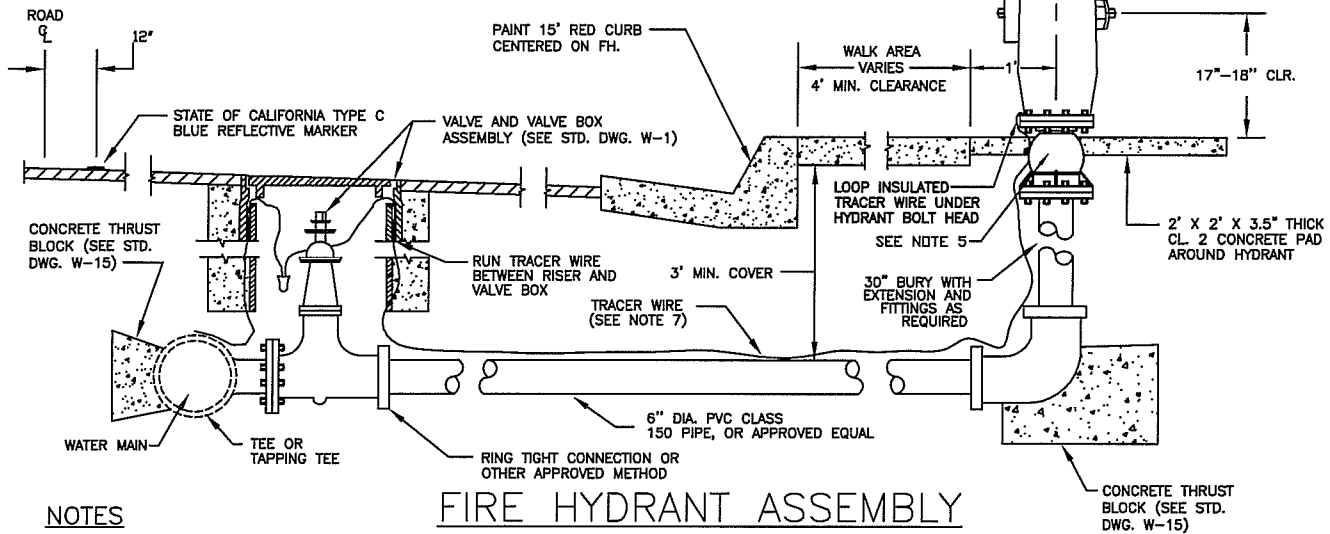




DETAIL A  
NO SCALE  
(SEE NOTE 3)



DETAIL B  
NO SCALE  
(SEE NOTE 4)



#### NOTES

### FIRE HYDRANT ASSEMBLY

1. THE FIRE HYDRANT ASSEMBLY SHALL INCLUDE HYDRANT BREAK OFF CHECK VALVE, EXTENSION, BURY, THRUST BLOCKS, GATE VALVE, VALVE BOX ASSEMBLY, PIPING, TEE, TRACER WIRE, AND ALL NECESSARY FITTINGS.
2. UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER, INSTALLATION OF HYDRANTS ON EXISTING WATER MAINS WILL REQUIRE HOT TAPPING METHOD OF INSTALLATION. THE APPROPRIATE TAPPING TEE AND VALVE SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.
3. THE FIRE HYDRANT SHALL BE INSTALLED AS SHOWN IN DETAIL "A" FOR COMMERCIAL OR FULL WIDTH SIDEWALK AREAS. LOWER 4.5" OUTLET TO FACE STREET.
4. SEE DETAIL "B" FOR INSTALLATION IN PLANTER AREAS. LOWER 4.5" OUTLET TO FACE ACCESS WAY.
5. COMMERCIAL HYDRANTS TO BE INSTALLED WITH A BREAK OFF CHECK VALVE ATTACHED WITH SOLID BOLTS, AVK MODEL 24-150-88-90, CLOW MODEL LBI 400.
6. HYDRANT SHALL BE PAINTED SAFETY YELLOW WITH SAFETY BLUE CAPS.
7. TRACER WIRE SHALL BE #10 STRANDED COPPER, WHITE INSULATION. PROVIDE 12" LEAD INSIDE OF VALVE BOX.

#### CITY APPROVED COMMERCIAL FIRE HYDRANTS

REQUIRED OUTLETS		
1 EA. 2.5" OUTLET	JAMES JONES CO. MODEL J-3770	*
2 EA. 4.5" OUTLET	CLOW CORPORATION MODEL 865	*
	AMERICAN AVK MODEL 2420	*

\* MIN. HYDRANT FLOW COEFFICIENT  
OF 0.9 ON ALL MODELS.



# CITY OF CLOVIS

## COMMERCIAL FIRE HYDRANT

DWG NO.

W-2A

REF. STD. SPECIFICATIONS  
SECTION 66

APPROVED BY:

CITY ENGINEER

DATE:

NO.

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SCALE: NTS

02-14-12

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FIRE GS

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08-14-12

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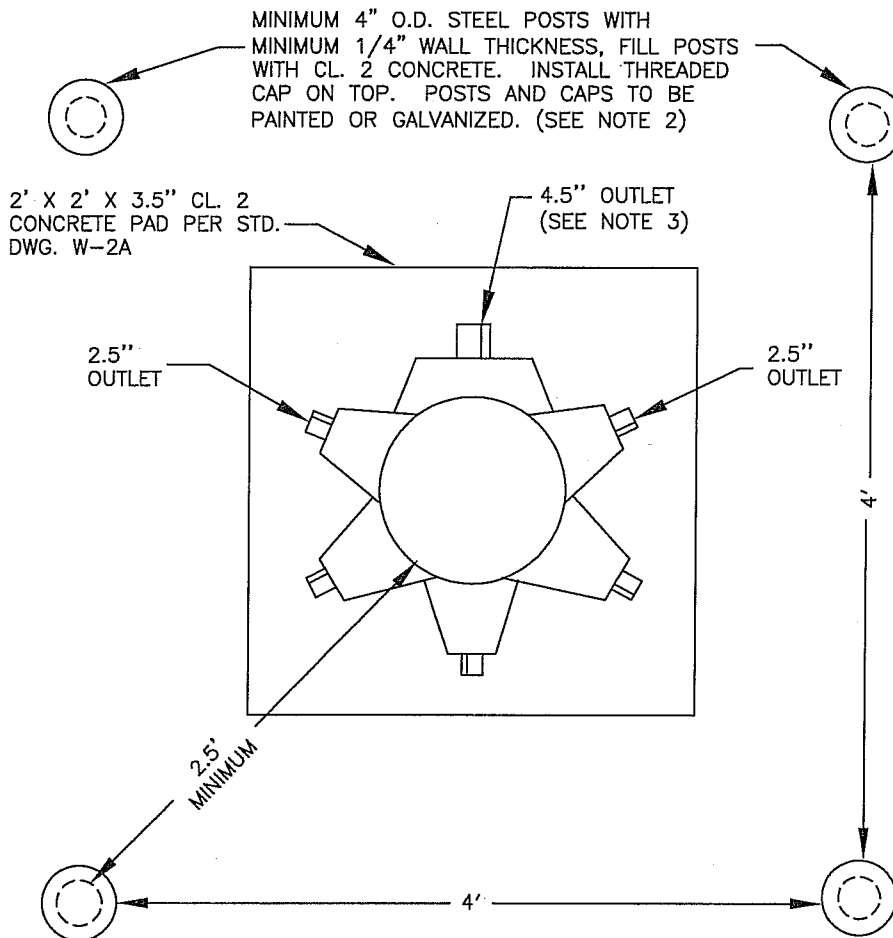
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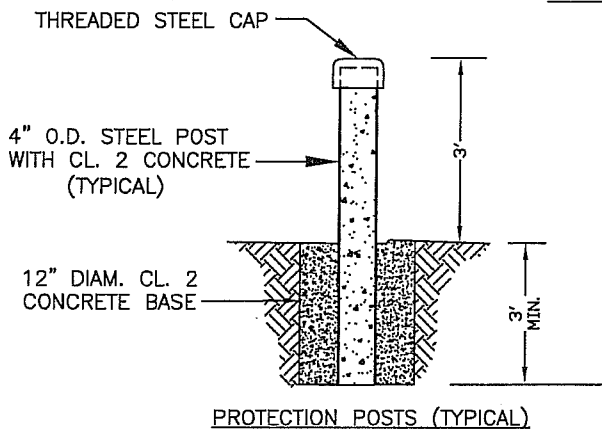
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PLAN VIEW - FIRE HYDRANT



NOTES:

1. PROTECTION POST SHALL BE REQUIRED ON ALL FIRE HYDRANTS THAT ARE LOCATED IN OR ADJACENT TO DRIVEWAYS, PRIVATE ROADS, ALLEYS OR PARKING LOTS WHERE THERE IS NO CURB PROTECTION OR NATURAL PROTECTION, AND WHERE DEEMED NECESSARY BY THE FIRE DEPARTMENT, PUBLIC UTILITIES DEPARTMENT OR WHERE FIRE HYDRANTS ARE CONTINUOUSLY BEING DAMAGED BY VEHICLES.
2. IF GALVANIZED POST AND CAPS ARE NOT USED, THEY SHALL BE PAINTED WITH 2 COATS OF RUST PRIMER FOLLOWED BY 2 COATS OF RUSTOLEUM SAFETY YELLOW PAINT.
3. FOR ALL HYDRANTS, THE 4.5" OUTLET SHALL FACE THE STREET, OR FACE THE ACCESS WAY FOR INTERIOR INSTALLATIONS.



# CITY OF CLOVIS

## FIRE HYDRANT PROTECTION POSTS

DWG NO.

W-3

REF. STD. SPECIFICATIONS  
SECTION 66

APPROVED BY:

CITY ENGINEER

DATE:

1/20/10

NO.

REVISED

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APPROVALS

02-25-09

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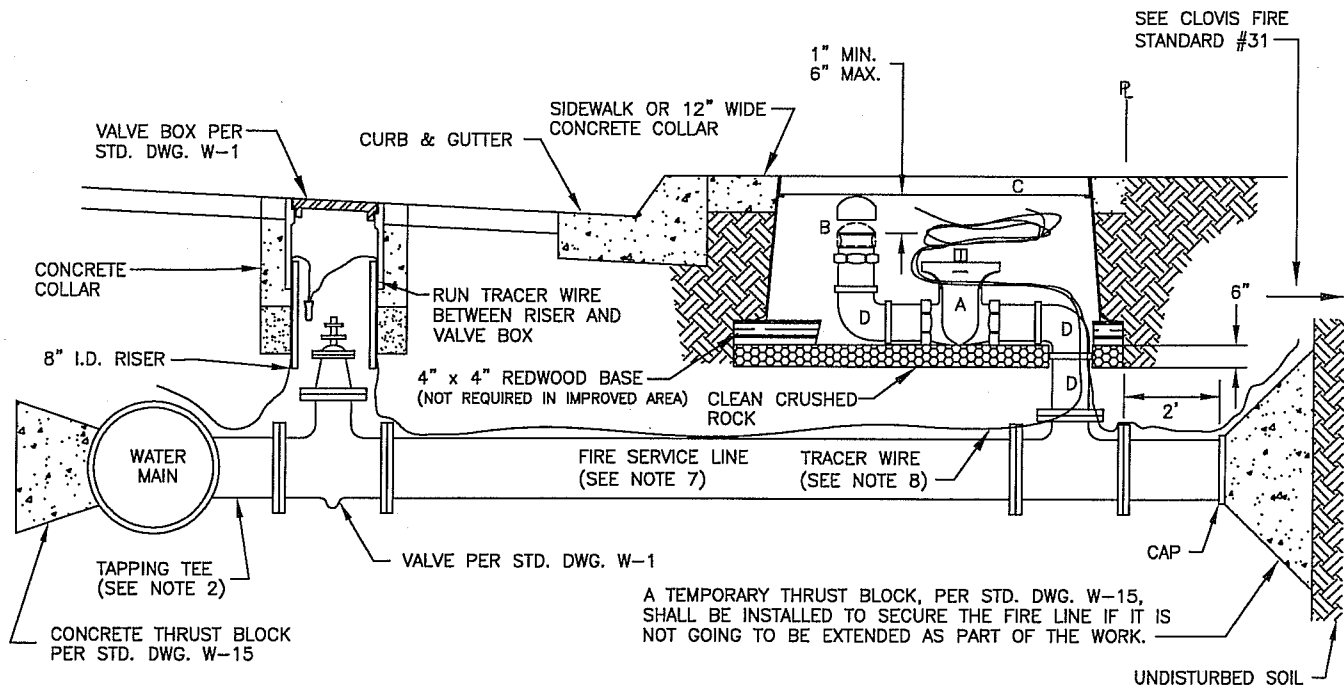
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FIRE TECH

SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1



#### NOTES:

1. THE FIRE SERVICE LINE SHALL INCLUDE ALL PIPE, PIPE FITTINGS AND STRUCTURES NECESSARY FOR THE SYSTEM TO BE OPERABLE. THE SERVICE LINE SHALL INCLUDE ALL CONCRETE THRUST BLOCKS, TEE FITTINGS WITH APPROPRIATE CONNECTORS, GATE VALVE, VALVE BOX PER STD. DWG. W-1, AND FIRE SERVICE LINE PIPE CAPPED.
2. UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER, THE INSTALLATION OF THE FIRE SERVICE LINE ON EXISTING WATER MAINS WILL REQUIRE THE HOT TAPPING METHOD. THE APPROPRIATE TAPPING TEE AND VALVE SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.
3. THE FIRE LINE SHALL EXTEND 2' PAST PROPERTY LINE FOR ON-SITE ACCESS.
4. ON-SITE MATERIALS SHALL BE APPROVED BY THE FIRE MARSHALL.
5. CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS LISTED IN LEGEND.
6. ALL INSTALLATIONS SHALL BE INSPECTED AND APPROVED BY CITY CONSTRUCTION INSPECTOR PRIOR TO POURING THRUST BLOCKS.
7. FIRE SERVICE LINE SHALL BE 4\" OR 6\" DIAMETER PVC CL 150 OR DUCTILE IRON AWWA C150 AS REQUIRED BY FIRE MARSHALL. PIPE MARKINGS TO BE VISIBLE FROM TOP OF OPEN TRENCH PRIOR TO BACKFILL.
8. TRACER WIRE SHALL BE #10 STRANDED COPPER, WHITE INSULATION., PROVIDE MINIMUM 12\" LEAD INSIDE VALVE BOX. TRACER WIRE RUN SHALL INCLUDE ALL FIRE SPRINKLER COMPONENTS AND TERMINATING AT RISER.

#### LEGEND:

- A. 4\" GATE VALVE w/2\" SQUARE METER WRENCH KEY FITTING.
- B. 4\" MALE QUICK-COUPLING HOSE ADAPTOR w/DUST CAP.
- C. CHRISTY FL 36 POLYMER BOX w/REINFORCED LID (OR APPROVED EQUAL) STAMPED \"FIRE SERVICE\".
- D. 4\" GALV. PIPE WRAPPED (BLOW OFF PIPE).



# CITY OF CLOVIS

## FIRE SERVICE LINE INSTALLATION

DWG NO.

**W-4**

REF. STD. SPECIFICATIONS  
SECTION 66

APPROVED BY:

CITY ENGINEER

DATE: 1/20/10

NO.

REVISED

BY

APPROVALS

SCALE: NTS

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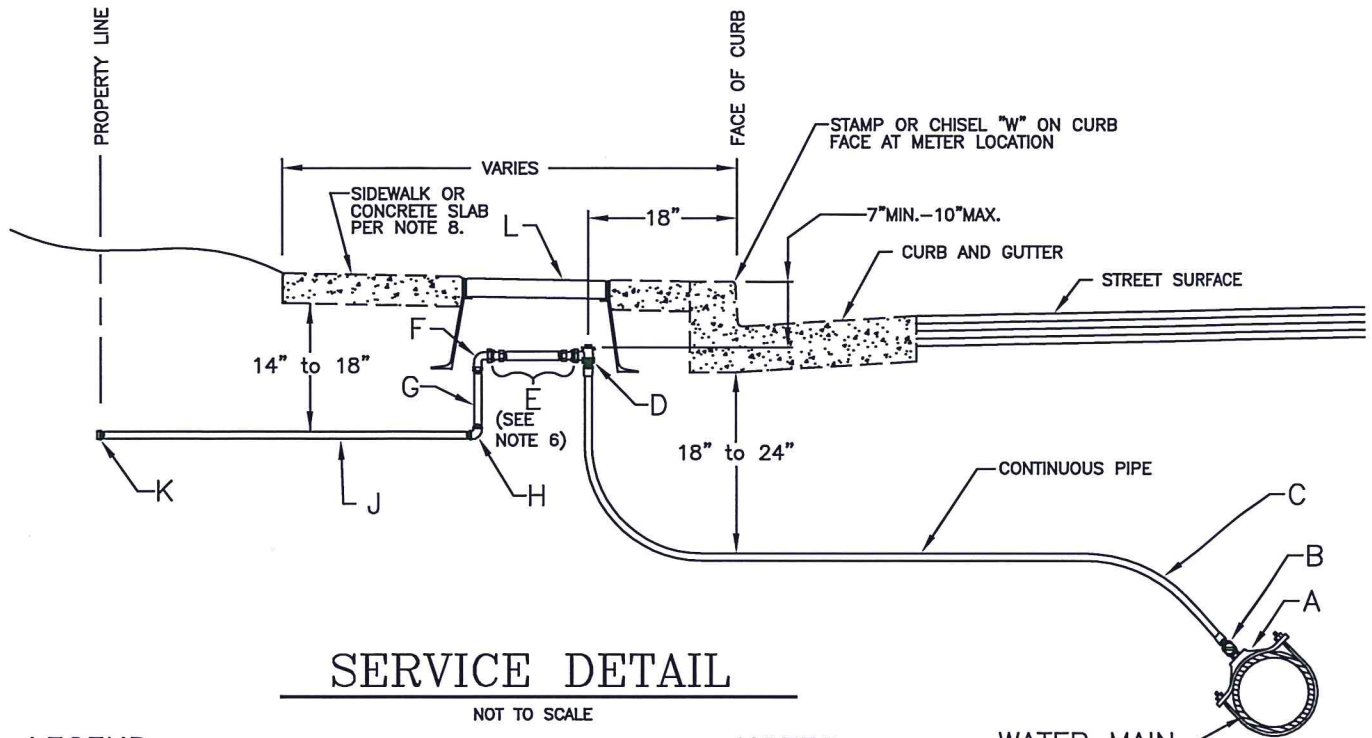
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FIRE 1/20/10

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SHEET 1 OF 1





### LEGEND:

- A. USE DOUBLE STRAP STAINLESS STEEL BAND, CC AWWA TAPER THREAD, MUELLER DR25 SERIES, ROMAC 202S, SMITH BLAIR 317, OR EQUAL.
- B. 1" CORPORATION STOP, AWWA TAPER THREAD. MUELLER 300 110 B-25008N; AY McDONALD 74701 B Q; FORD NFB1000-4-Q. USE 1 1/4" CORPORATION STOP WHEN APPLICABLE. AY McDONALD 74701B-22Q, FORD NFB 1000-45-Q.
- C. 1" CONTINUOUS POLYETHYLENE COATED COPPER PIPE, TYPE "K" SOFT. MUELLER STREAMLINE OR APPROVED EQUAL FOR LENGTHS 40' OR GREATER, USE 1 1/4" CONTINUOUS POLYETHYLENE COATED COPPER PIPE, TYPE "K" SOFT. COLOR BLUE FOR POTABLE AND PURPLE FOR RECYCLED WATER.
- D. 1" GROUND KEY ANGLE VALVE METER STOP WITH RUBBER METER COUPLING WASHER. MUELLER H-14258 NL; FORD KV 43-444 WQ-NL; AY McDONALD 74602 Q. USE 1 1/4" X 1" NL ANGLE PLUG STYLE METER STOP WHEN APPLICABLE. AY McDONALD 74602-22, FORD KV43-454 WQ-NL.
- E. 10.75" SPACER ASSEMBLY, COMPOSED OF A 1" X 7.5" GALVANIZED NIPPLE INSTALLED LEVEL AND 2 METER ADAPTORS, A-24'S BRASS BUSHINGS OR PRE-APPROVED EQUAL.
- F. 1" BRASS QUARTER BEND METER COUPLING WITH RUBBER METER COUPLING WASHER. (FEMALE/FEMALE)
- G. 1" OR LARGER SCHEDULE 80 PVC PIPE. MUST BE VERTICAL. ANY CHANGES IN PIPE SIZE MUST BE DONE WITH SCHEDULE 80 OR STAINLESS STEEL FITTINGS.
- H. 1" OR LARGER 90° EL SCHEDULE 80 PVC.
- J. 1" OR LARGER SCHEDULE 80 PVC.
- K. 1" OR LARGER SCHEDULE 80 PVC COUPLING W/PVC PLUG OR CAP.
- L. CHRISTY FL9 OR B9 (OR PRE-APPROVED EQUAL) METERBOX AND REINFORCED CONCRETE LID WITH CAST IRON READING DOOR, B09G.

### NOTES:

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS LISTED IN LEGEND.
2. WATER METER TO BE FURNISHED AND INSTALLED BY CITY AT THE OWNER'S EXPENSE.
3. WATER SERVICE AND METER BOX INSTALLATION SHALL BE INSPECTED AND APPROVED BY CITY PRIOR TO SIDEWALK INSTALLATION.
4. WATER SERVICES SHALL BE LOCATED A MINIMUM OF 3' OUTSIDE OF DRIVE APPROACH WINGS.
5. ALL MATERIALS SHALL BE AS NOTED OR CITY APPROVED EQUAL.
6. A CLEAR SPACE OF AT LEAST 3" SHALL BE MAINTAINED BETWEEN SPACER ASSEMBLY (E) AND TOP OF DIRT INSIDE BOX.
7. ALL METER BOXES IN DIRT OR LANDSCAPE AREAS SHALL BE SET IN A CONCRETE SLAB MEASURING AT LEAST 12" ON ALL SIDES, 3 1/2" THICK.
8. METER BOXES SHALL BE CLEARED OF ALL OTHER FACILITIES.
9. METER BOX SHALL BE CENTERED OVER SPACER ASSEMBLY.
10. SEE STANDARD W-5A FOR ADJACENT METER BOX PLACEMENT.
11. BRASS ANGLE VALVE, CORP STOP AND QUARTER BEND MUST BE COMPLIANT WITH AB 1953 "LEAD FREE".
12. IF THE WATER SERVICE INCLUDES A BACKFLOW DEVICE (SEE W-19), ITEMS G, H & J SHALL BE GALVANIZED STEEL PIPE DOUBLE WRAPPED IN 10 MIL TAPE.

WATER MAIN



# CITY OF CLOVIS

## 1" WATER SERVICE

DWG NO.

# W-5

REF. STANDARD SPECIFICATIONS

APPROVED BY:

NO.

REVISED

BY

APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

7/5/17

NO.

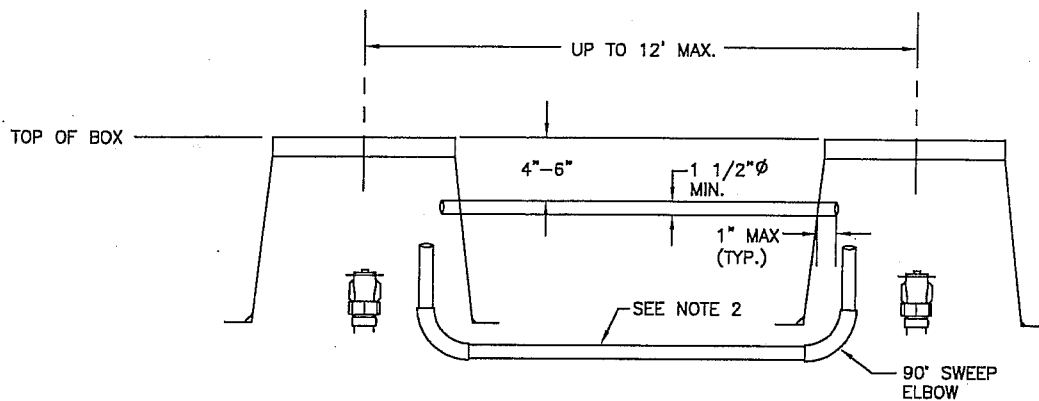
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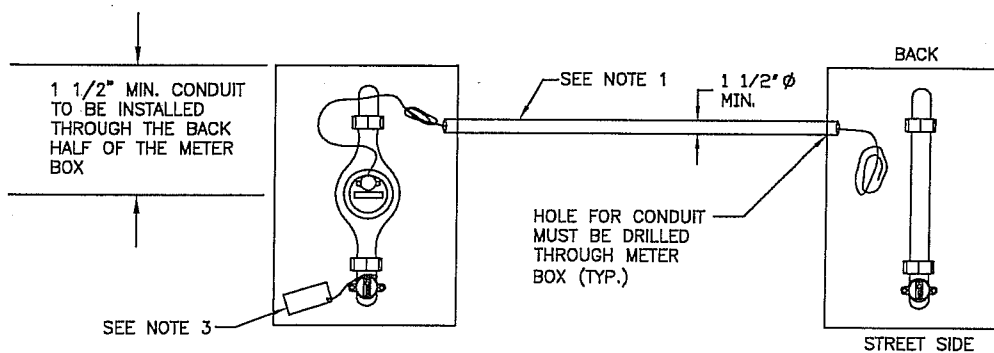
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FRONT VIEW



PLAN VIEW

**NOTES:**

1. INSTALL 1 1/2" MIN. SCH. 40 PVC CONDUIT BETWEEN ALL ADJACENT WATER SERVICE BOXES WHICH ARE 12' OR LESS APART.
2. OPTIONAL INSTALLATION TO ACCOMMODATE OTHER UTILITIES EXISTING BETWEEN BOXES.
3. ON COMMERCIAL METERS WIRE TIE BRASS TAG TO ANGLE STOP INDICATING ADDRESS NUMBER INCLUDING SUITE NUMBER.



# CITY OF CLOVIS

## ADJACENT METER BOX PLACEMENT

DWG NO.

**W-5A**

REF. STD. SPECIFICATIONS  
SECTION 66

APPROVED BY:

NO.

REVISED

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APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

*9/21/09*

02-25-09  
09-16-09

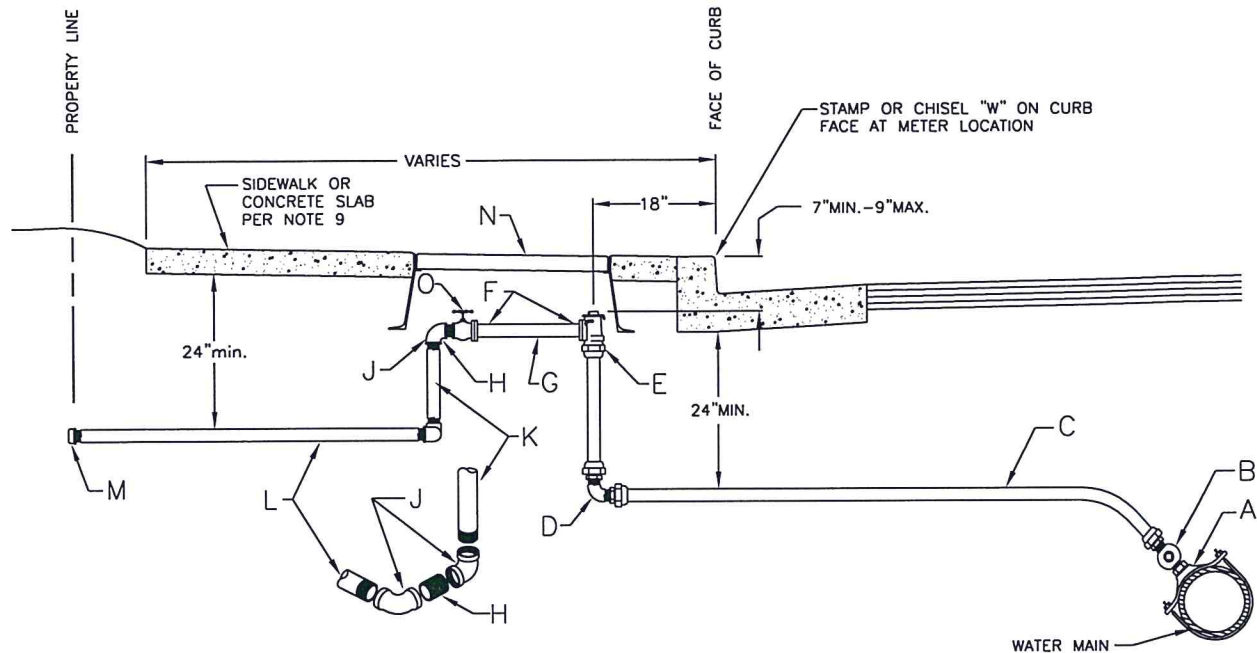
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SHEET 1 OF 1



## SERVICE DETAIL

NOT TO SCALE

### LEGEND:

- USE DOUBLE STRAP STAINLESS STEEL BAND, CC AWWA TAPER THREAD, MUELLER DR25 SERIES, ROMAC 202S, SMITH BLAIR 317, OR EQUAL.
- 2" CORPORATION STOP. MUELLER 110 COMPRESSION CONNECTION, MUELLER B-25008 N; AY McDONALD 74701BQ; FORD NFB1000-6Q, 7Q.
- 2" POLYETHYLENE COATED COPPER PIPE, TYPE "K" SOFT. MUELLER STREAMLINE OR APPROVED EQUAL. COLOR BLUE FOR POTABLE AND PURPLE FOR RECYCLED WATER.
- QUARTER BEND COUPLING, 2" MUELLER 110 COMPRESSION CONNECTION; MUELLER H-15526N, FORD NL44-77Q, AY McDONALD 74761Q.
- 2" FLANGED BALL ANGLE METER STOP ADAPTABLE TO EITHER 1-1/2" OR 2" FLANGE FITTING. MUELLER 110 COMPRESSION CONNECTION B24276N, AY McDONALD 74602BQ, FORD NBFA43-777WQ.
- GALVANIZED STEEL METER SPACER TWO-HOLE FLANGE W/ GASKET.
- METER SPACER 13-1/4" FOR 1-1/2" SERVICE, 17-1/4" FOR 2" SERVICE.
- SERVICE SIZE GALVANIZED CLOSE NIPPLE.
- SERVICE SIZE 90° GALVANIZED ELBOW.
- SERVICE SIZE 12" GALVANIZED RISER.
- SERVICE SIZE GALVANIZED PIPE.
- SERVICE SIZE GALVANIZED CAP (COUPLING W/PVC PLUG OR CAP).
- 17" X 30" METERBOX (CHRISTY FL 36 OR APPROVED EQUAL) WITH REINFORCED CONCRETE LID WITH CAST IRON READING DOOR, B36G.
- SERVICE SIZE GATE VALVE.

### NOTES:

- CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS LISTED IN LEGEND.
- WATER METER TO BE FURNISHED AND INSTALLED BY CITY AT THE OWNERS EXPENSE.
- WATER METER AND SERVICE BOX INSTALLATION SHALL BE INSPECTED AND APPROVED BY CITY PRIOR TO SIDEWALK INSTALLATION.
- WATER SERVICES SHALL BE LOCATED A MINIMUM OF 3 FEET OUTSIDE OF DRIVE APPROACH WINGS.
- ALL MATERIALS SHALL BE AS NOTED OR CITY APPROVED EQUAL.
- A CLEAR SPACE OF AT LEAST 3 INCHES SHALL BE MAINTAINED BETWEEN (H) SPACER SPOOL AND TOP OF DIRT INSIDE BOX.
- REFER TO STANDARD DRAWING W-6A FOR SERVICE DETAIL.
- ALL GALVANIZED PIPE AND FITTINGS SHALL BE DOUBLE WRAPPED WITH 10 MIL TAPE.
- ALL METER BOXES IN DIRT OR LANDSCAPE AREAS SHALL BE SET IN CONCRETE SLAB MEASURING AT LEAST 1' AROUND ALL SIDES OF BOX AND 3-1/2" THICK.
- METER BOXES SHALL BE CLEARED OF ALL OTHER FACILITIES.
- METER BOX SHALL BE CENTERED OVER SPACER ASSEMBLY.
- SEE W5-A FOR METER BOX PLACEMENT.
- BRASS ANGLE VALVE, CORP STOP AND QTR BEND MUST BE COMPLIANT WITH AB 1953 "LEAD FREE".



# CITY OF CLOVIS

## 1 1/2" or 2" WATER SERVICE

DWG NO.

### W-6

REF. STD. SPECIFICATIONS  
SECTION 66

APPROVED BY:

CITY ENGINEER

DATE:

NO.

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APPROVALS

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6-2-17

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SCALE: NTS

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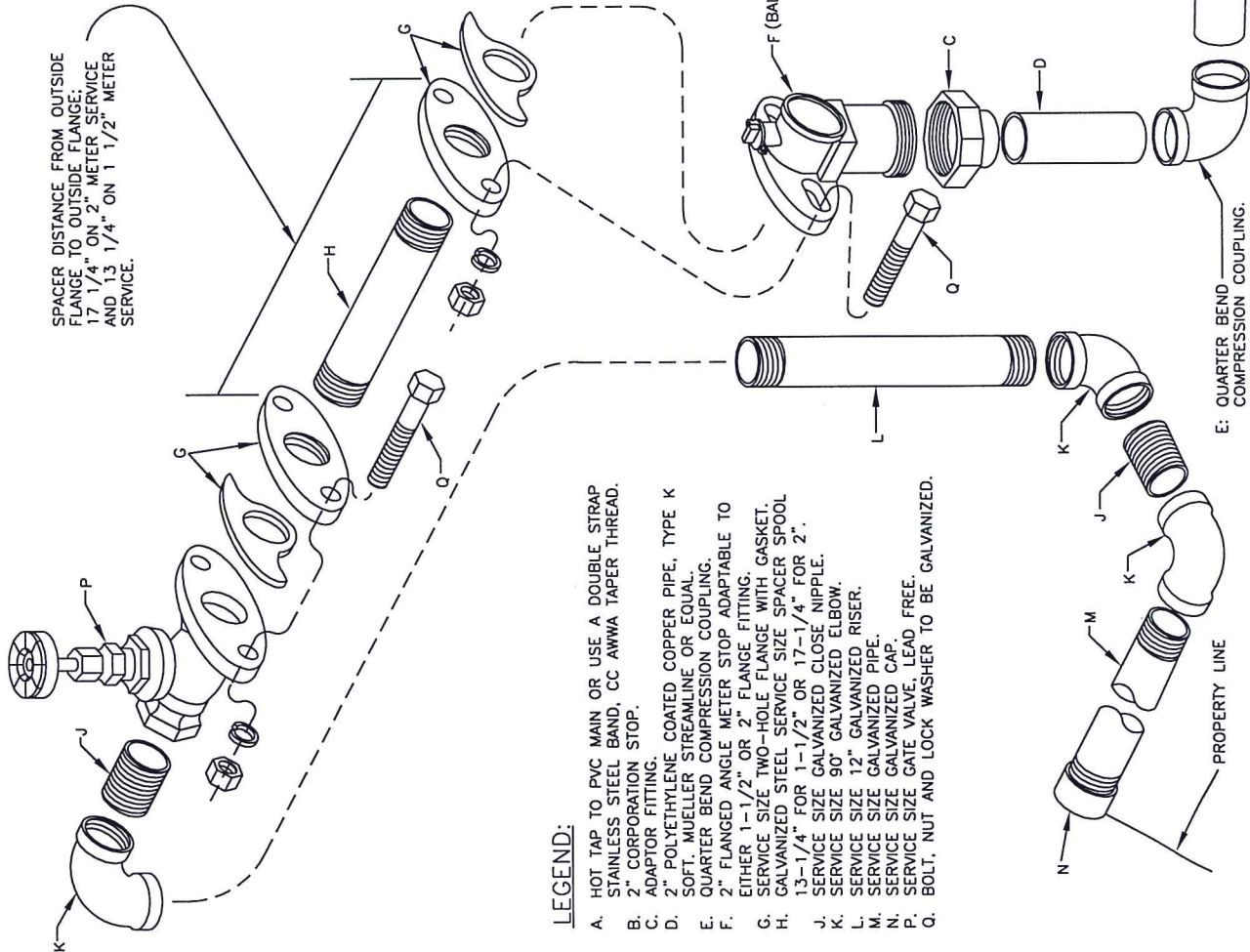
SHEET 1 OF 1



# NOTES:

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS LISTED IN LEGEND.
2. WATER METER TO BE FURNISHED AND INSTALLED BY CITY.
3. WATER SERVICE AND METER BOX INSTALLATION SHALL BE INSPECTED AND APPROVED BY CITY PRIOR TO SIDEWALK INSTALLATION.
4. NO WATER SERVICE IN DRIVEWAY APPROACH OR WING WILL BE ACCEPTED.
5. ALL MATERIALS FURNISHED SHALL BE AS NOTED, OR CITY APPROVED EQUAL.
6. WHERE LEGEND SPECIFIES A SIZE OF 1-1/2" OR 2", INSTALL SIZE TO MATCH DESIGNATED SERVICE SIZE, I.E., 1-1/2" OR 2" WATER SERVICE.
7. SEE STANDARD W-6 FOR SPECIFICATIONS.
8. ALL GALVANIZED PIPE AND FITTINGS SHALL BE DOUBLE WRAPPED WITH 10 MIL TAPE.

SPACER DISTANCE FROM OUTSIDE FLANGE TO OUTSIDE FLANGE: 17 1/4" ON 2" METER SERVICE AND 13 1/4" ON 1 1/2" METER SERVICE.



## LEGEND:

- A. HOT TAP TO PVC MAIN OR USE A DOUBLE STRAP STAINLESS STEEL BAND, CC AWWA TAPER THREAD.
- B. 2" CORPORATION STOP.
- C. ADAPTOR FITTING.
- D. 2" POLYETHYLENE COATED COPPER PIPE, TYPE K SOFT. MUELLER STREAMLINE OR EQUAL.
- E. QUARTER BEND COMPRESSION COUPLING.
- F. 2" FLANGED ANGLE METER STOP ADAPTABLE TO EITHER 1-1/2" OR 2" FLANGE FITTING.
- G. SERVICE SIZE TWO-HOLE FLANGE WITH GASKET.
- H. GALVANIZED STEEL SERVICE SIZE SPACER SPOOL 13-1/4" FOR 1-1/2" OR 17-1/4" FOR 2".
- I. SERVICE SIZE GALVANIZED CLOSE NIPPLE.
- J. SERVICE SIZE 90° GALVANIZED ELBOW.
- K. SERVICE SIZE 12" GALVANIZED RISER.
- L. SERVICE SIZE GALVANIZED PIPE.
- M. SERVICE SIZE GALVANIZED CAP.
- N. SERVICE SIZE GATE VALVE, LEAD FREE.
- O. BOLT, NUT AND LOCK WASHER TO BE GALVANIZED.

E: QUARTER BEND COMPRESSION COUPLING. (NOT REQUIRED ON ROLL TYPE COPPER AND POLY TUBING). AY McDonald 747610, FORD NL44-66Q, NL44-77Q, MUELLER H-15526N.



# CITY OF CLOVIS

## BLOWN-UP VIEW 1 1/2" or 2" WATER SERVICE

DWG NO.  
**W-6A**

REF. STD. SPECIFICATIONS  
SECTION 66

APPROVED BY:

CITY ENGINEER

DATE:

NO.

REVISED

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APPROVALS

SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1

6-2-17

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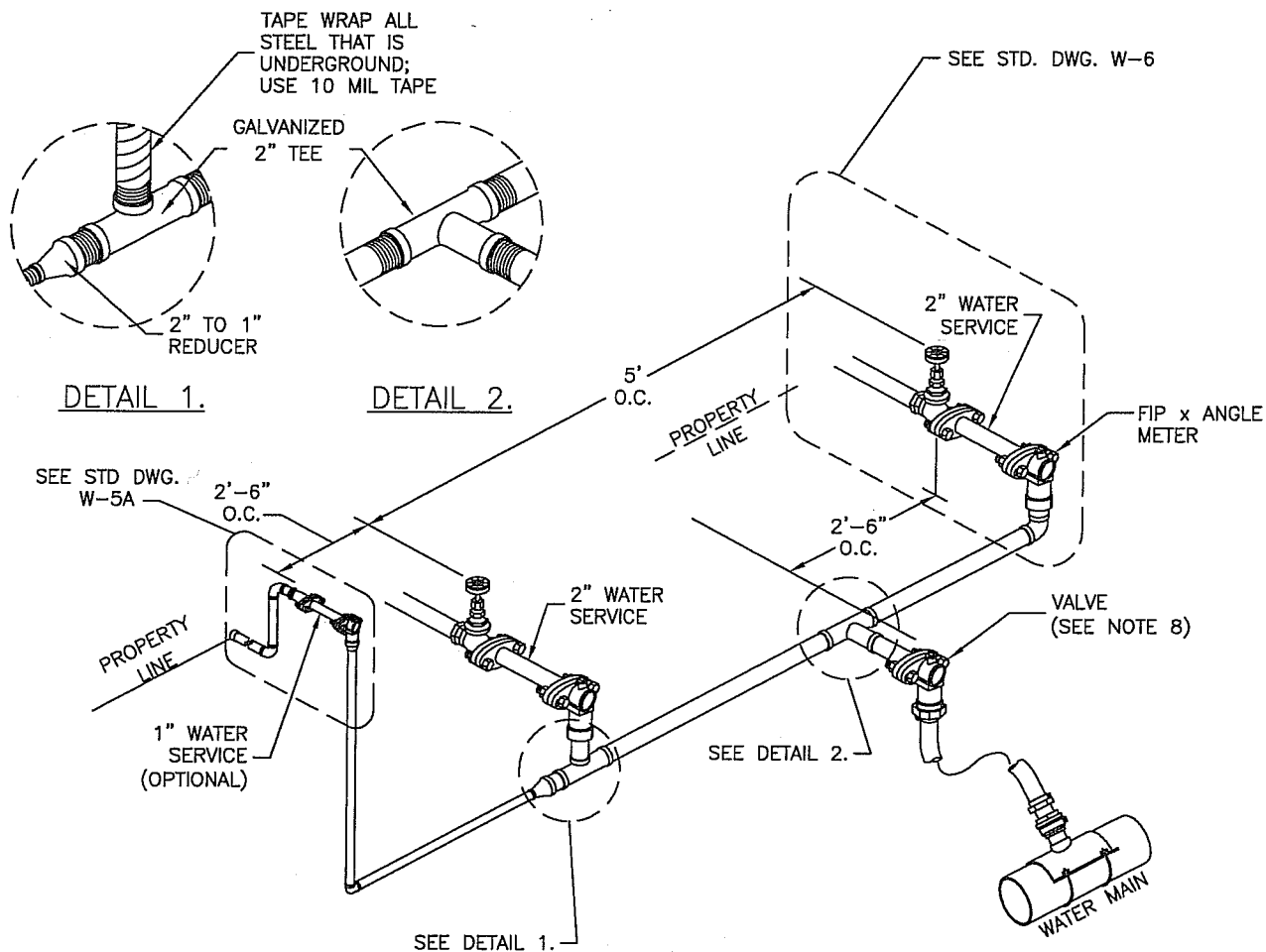
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#### NOTES:

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS AS APPROPRIATE AS LISTED ON STD. DWGS. W-5, W-5A, W-6, W-6A.
2. WATER METER TO BE FURNISHED AND INSTALLED BY CITY.
3. WATER SERVICE AND METER BOX INSTALLATION SHALL BE INSPECTED AND APPROVED BY CITY PRIOR TO SIDEWALK INSTALLATION.
4. NO WATER SERVICE IN DRIVEWAY APPROACH OR WING WILL BE ACCEPTED.
5. ALL MATERIALS FURNISHED SHALL BE AS NOTED, OR CITY APPROVED EQUAL.
6. SEE STD. DWGS. W-5 AND W-6, W-6A FOR SPECIFICATIONS.
7. ALL GALVANIZED PIPE AND FITTINGS SHALL BE WRAPPED AND FLETCHER COATED.
8. ANGLE METER STOP TO BE MUELLER 110 COMPRESSION B-24276N BALL VALVE OR CITY APPROVED EQUAL.
9. RETROFIT MANIFOLD REQUIRES PRIOR APPROVAL FROM PUBLIC UTILITIES DEPARTMENT.



## CITY OF CLOVIS

### 1" & 2" COMMERCIAL RETROFIT MANIFOLD WATER SERVICE LAYOUT

DWG NO.

**W-6B**

REF. STD. SPECIFICATIONS  
SECTION 66

APPROVED BY:

NO.

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APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

1/20/10

11-24-09

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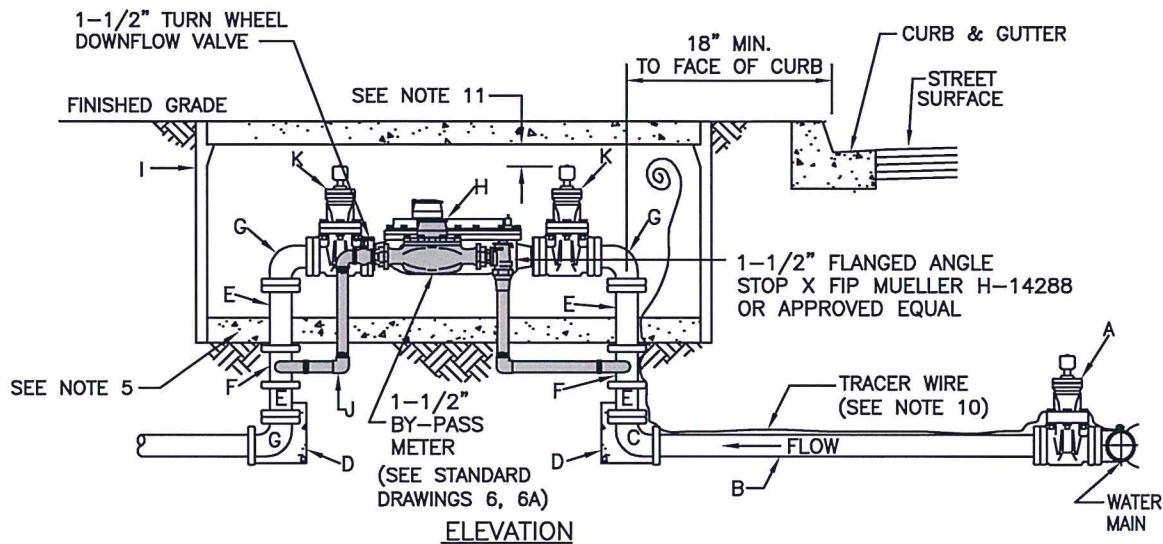
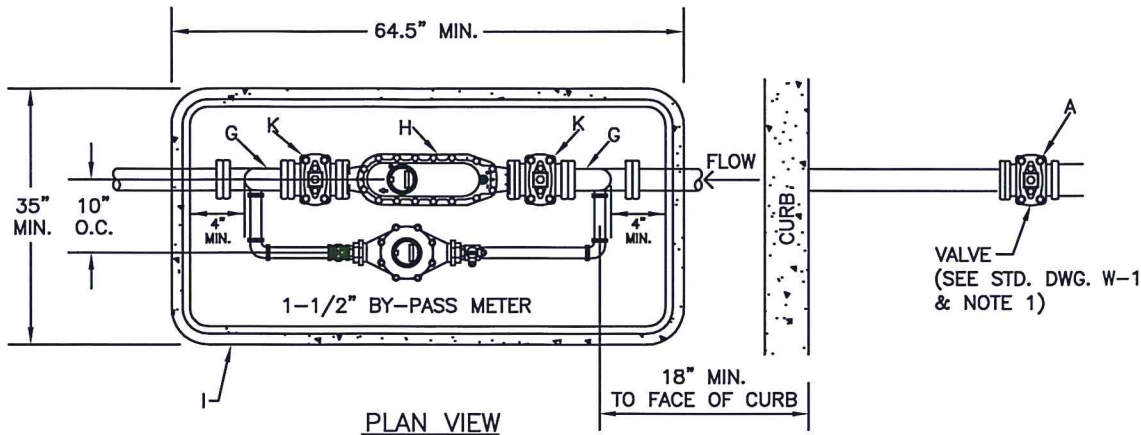
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SHEET 1 OF 1



#### LEGEND:

- 4" FLANGED GATE VALVE (SEE NOTE 1).
- 4" PVC C900 OR DUCTILE IRON PIPE CLASS 150 OR HIGHER.
- 4"x3" DUCTILE IRON 90° MJ X FLANGE ELBOW.
- THRUST BLOCK, SEE STD. DWG. W-15.
- 3" DUCTILE IRON FLANGED SPOOL; LENGTH AS NEEDED.
- 3"x3" DUCTILE IRON FLANGED TEE W/3"x2" TAPPED BLIND FLANGE W/ REDUCER BUSHING.
- 3" DUCTILE IRON FLANGED ELBOW.
- FLANGED 3" METER W/STRAINER (SEE NOTE 7).
- CHRISTY B52 BOX & B52M3 LID, SIZED TO FIT.
- GALVANIZED PIPE.
- 3" FLANGED GATE VALVE (SEE NOTE 1).

#### NOTES:

- VALVES TO BE MUELLER A-2360 OR EQUAL WITH 2" SQUARE NUTS, CCW TO OPEN.
- 1-1/2" BY-PASS TO BE LOCATED INSIDE METER BOX. (REFER TO STD. DWG. W-6 & W-6A).
- 1-1/2" BY-PASS INLET VALVE MUST BE A FLANGED ANGLE STOP PLUG OR BALL VALVE.
- 1-1/2" BY-PASS DOWNFLOW VALVE MUST BE A BRASS RED & WHITE TURN WHEEL VALVE.
- 3" SEAL/BENCH WITH CONCRETE INSIDE OF VAULTS.
- METER BOX IN SIDEWALK OR PLACE 3-1/2" CL.2 CONCRETE SLAB, 1' ON ALL SIDES OF BOX.
- 17-1/4" GALVANIZED SPACER SHALL BE INSTALLED IN PLACE OF THE METER/ STRAINER (H).
- DOUBLE WRAP ALL GALVANIZED PIPE THAT IS UNDERGROUND WITH 10 MIL TAPE.
- CENTER METER ASSEMBLY IN BOX.
- TRACER WIRE SHALL BE #10 STRANDED COPPER, WHITE INSULATION.
- TOP OF OPERATIVE SQUARE NUT TO BE 4" MIN. TO 12" MAX. BELOW BOTTOM OF LID.



# CITY OF CLOVIS

DWG NO.

W-7

## 3" COMPOUND WATER SERVICE

REF. STD. SPECIFICATIONS  
SECTION 66

APPROVED BY:

NO.

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APPROVALS

SCALE: NTS

CITY ENGINEER

DATE:

01-14-16

01-07-16

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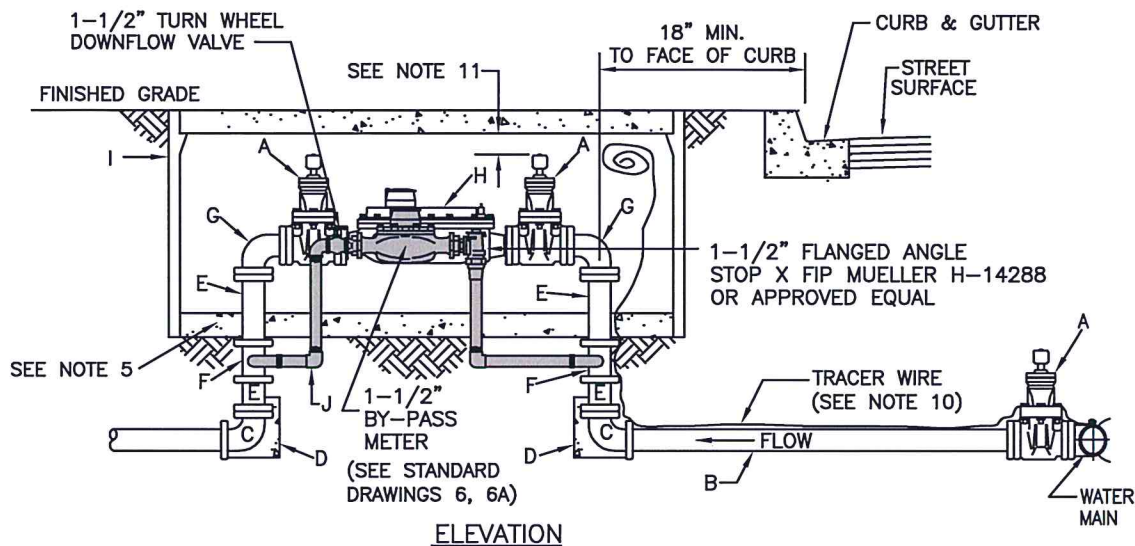
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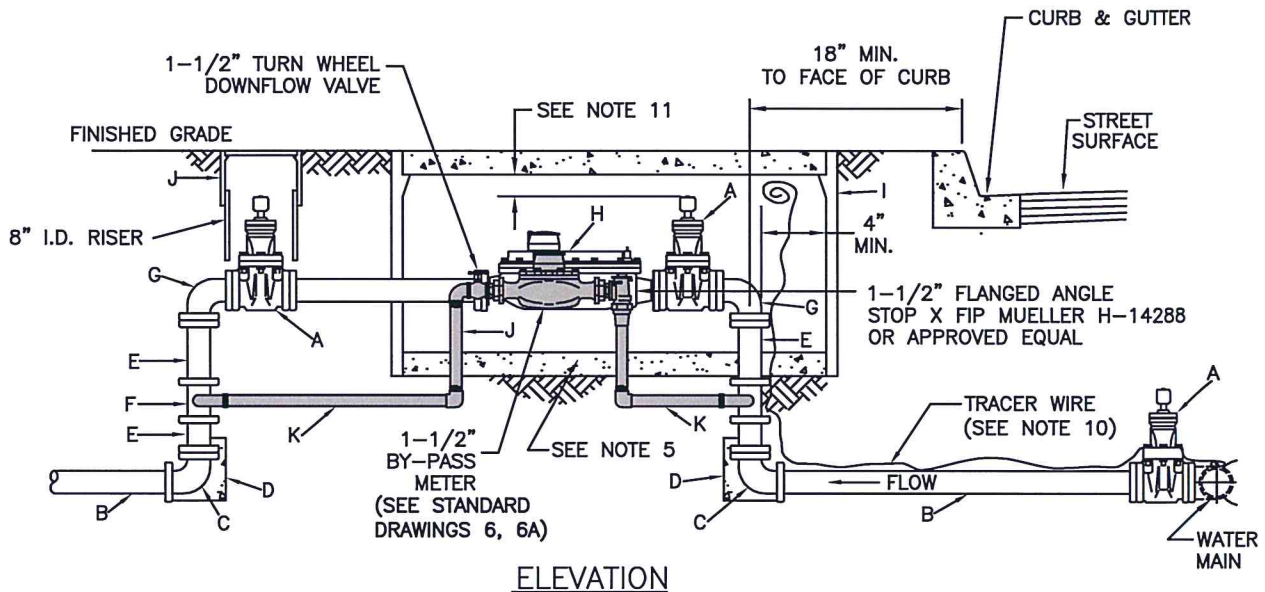
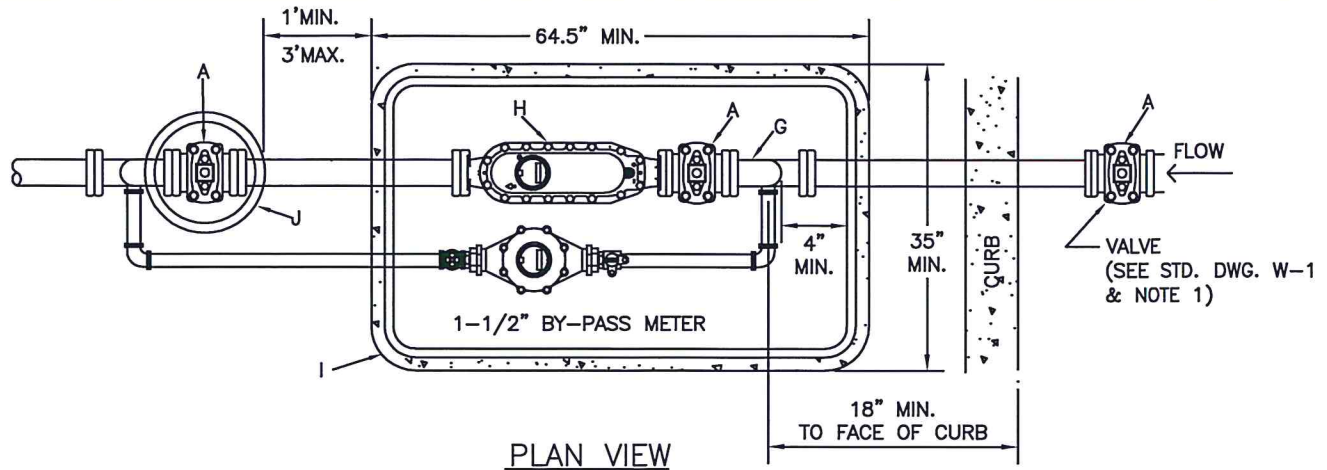
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#### LEGEND:

- A. 6" FLANGED GATE VALVE, CCW TO OPEN.
- B. 6" PVC C900 OR DUCTILE IRON PIPE CLASS 150 OR HIGHER.
- C. 6" DUCTILE IRON 90° FLANGE x MJ ELBOWS.
- D. THRUST BLOCK, SEE STD. DWG. W-15.
- E. 6" DUCTILE IRON FLANGED SPOOL, LENGTH AS NEEDED.
- F. 6"x6" DUCTILE IRON FLANGED TEE W/6"x 2" TAPPED BLIND FLANGE W/ REDUCER BUSHING.
- G. 6" DUCTILE IRON FLANGED ELBOW.
- H. FLANGED 6" METER W/STRAINER (SEE NOTE 7).
- I. CHRISTY B52 BOX & B52M3 LID, SIZED TO FIT.
- J. CHRISTY NO. G5 TRAFFIC BOX.
- K. GALVANIZED PIPE.

#### NOTES:

1. VALVES TO BE MUELLER A-2360 OR EQUAL WITH 2" SQUARE NUTS, CCW TO OPEN.
2. 1-1/2" BY-PASS TO BE LOCATED INSIDE METER BOX. (REFER TO STD. DWGS. W-6 & W-6A).
3. 1-1/2" BY-PASS INLET VALVE MUST BE A FLANGED ANGLE STOP PLUG OR BALL VALVE.
4. 1-1/2" BY-PASS DOWNFLOW VALVE MUST BE A BRASS RED & WHITE TURN WHEEL VALVE.
5. 6" SEAL/BENCH WITH CONCRETE INSIDE OF VAULTS.
6. METER BOX IN SIDEWALK OR PLACE 3-1/2" CL2 CONCRETE SLAB, 1' ON ALL SIDES OF BOX.
7. 24-1/4" GALVANIZED SPACER SHALL BE INSTALLED IN PLACE OF THE METER/ STRAINER (H).
8. DOUBLE WRAP ALL GALVANIZED PIPE THAT IS UNDERGROUND WITH 10 MIL TAPE.
9. CENTER METER ASSEMBLY IN BOX.
10. TRACER WIRE TO BE #10 STRANDED COPPER, WHITE INSULATION.
11. TOP OF OPERATIVE SQUARE NUT TO BE 4" MIN. TO 8" MAX. BELOW BOTTOM OF LID.



## CITY OF CLOVIS

### 6" Compound Water Service

DWG NO.

W-9

REF. STD. SPECIFICATIONS  
SECTION 66

SCALE: NTS

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DATE:

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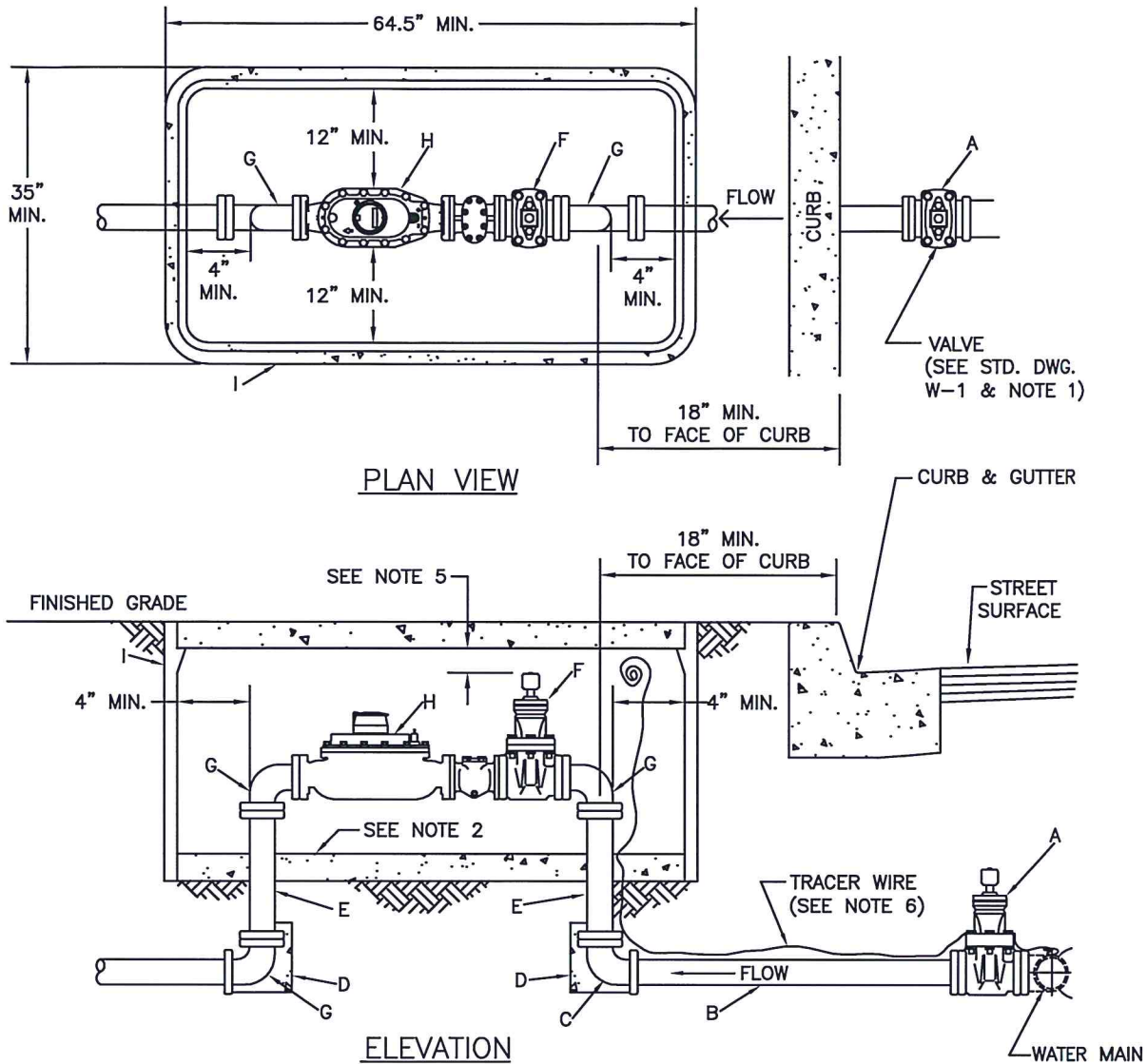
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#### LEGEND:

- A. 4" FLANGED GATE VALVE, CCW TO OPEN.
- B. 4" PVC C900 OR DUCTILE IRON PIPE CLASS 150 OR HIGHER.
- C. 4"x3" DUCTILE IRON FLANGED ELBOW.
- D. THRUST BLOCK 1.5 SQ. FT.
- E. 3" DUCTILE IRON FLANGED SPOOL, LENGTH AS NEEDED.
- F. 3" FLANGED GATE VALVE, CCW TO OPEN.
- G. 3" DUCTILE IRON FLANGED ELBOW.
- H. FLANGED 3" TURBO METER AND WATER METER STRAINER (SEE NOTE 4).
- I. CHRISTY B52 BOX & B52M3 LID, SIZED TO FIT.

#### NOTES:

1. VALVES TO BE MUELLER A-2360 OR EQUAL WITH 2" SQUARE NUTS, CCW TO OPEN.
2. 6" SEAL/BENCH WITH CONCRETE INSIDE OF VAULTS.
3. METER BOX IN SIDEWALK OR PLACE 3-1/2" THICK CL2 CONCRETE SLAB, 1' ON ALL SIDES OF BOX.
4. 19-1/4" GALVANIZED SPACER SHALL BE INSTALLED IN PLACE OF THE METER/ STRAINER (H).
5. TOP OF OPERATIVE SQUARE NUT TO BE 4" MIN. TO 12" MAX BELOW BOTTOM OF LID.
6. TRACER WIRE TO BE #10 STRANDED COPPER WITH WHITE INSULATION.



## CITY OF CLOVIS

### 3" TURBO WATER SERVICE

DWG NO.

W-10

REF. STD. SPECIFICATIONS  
SECTION 66

SCALE: NTS

DRAWN BY: JA

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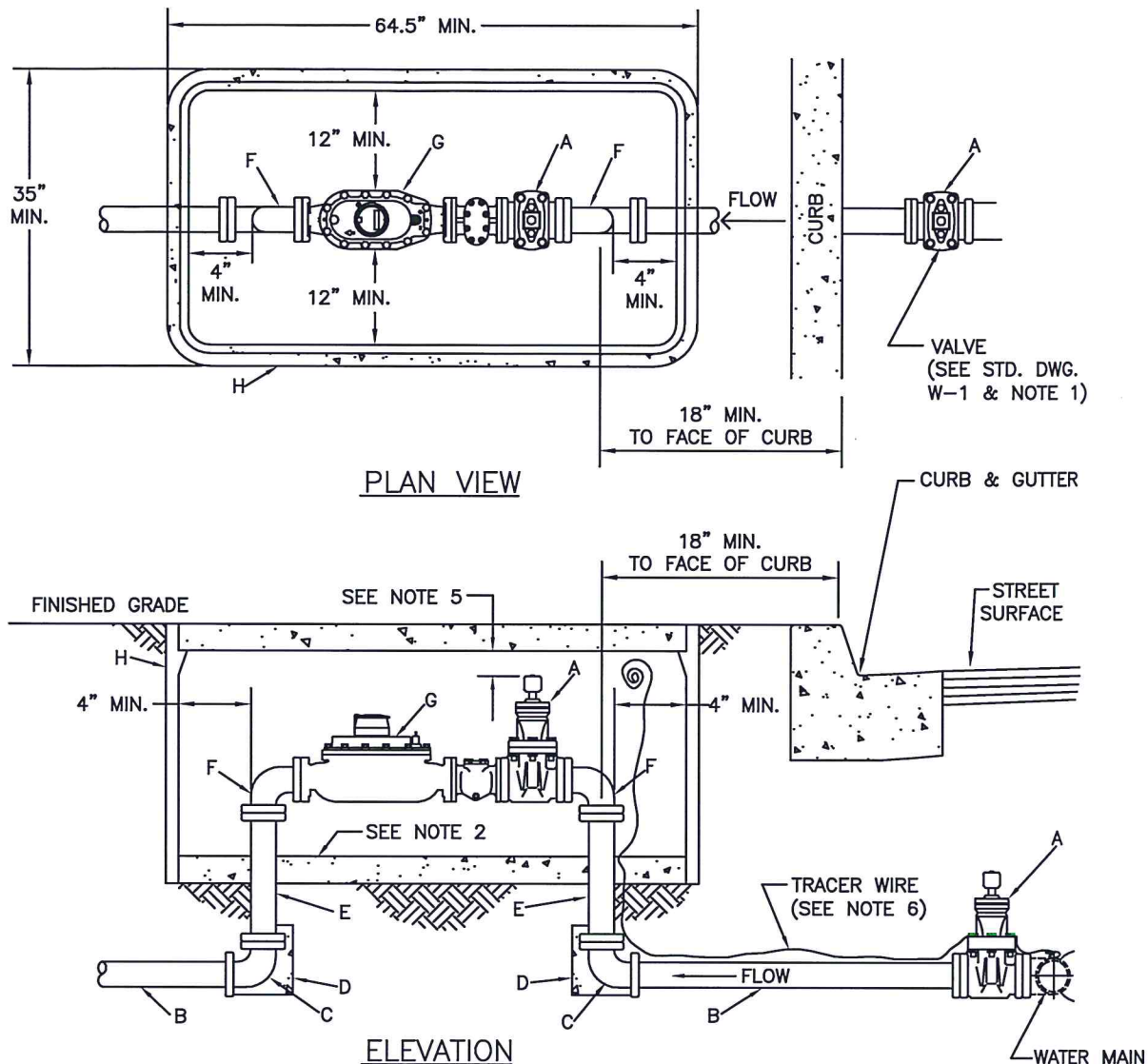
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#### LEGEND:

- A. 4" FLANGED GATE VALVE, CCW TO OPEN.
- B. 4" PVC C900 OR DUCTILE IRON PIPE CLASS 150 OR HIGHER.
- C. 4" DUCTILE IRON FLANGE x MJ ELBOW.
- D. THRUST BLOCK SEE STD. DWG. W-15.
- E. 4" DUCTILE IRON FLANGED SPOOL, LENGTH AS NEEDED.
- F. 4" DUCTILE IRON FLANGED ELBOW.
- G. FLANGED 4" TURBO METER AND WATER METER STRAINER (SEE NOTE 4).
- H. CHRISTY B52 BOX & B52M3 LID, SIZED TO FIT.

#### NOTES:

- 1. VALVES TO BE MUELLER A-2360 OR EQUAL WITH 2" SQUARE NUTS, CCW TO OPEN.
- 2. 6" SEAL/BENCH WITH CONCRETE INSIDE OF VAULTS.
- 3. METER BOX IN SIDEWALK OR PLACE 3-1/2" THICK CL2 CONCRETE SLAB, 1' ON ALL SIDES OF BOX.
- 4. 23-1/4" GALVANIZED SPACER SHALL BE INSTALLED IN PLACE OF THE METER/ STRAINER (F).
- 5. TOP OF OPERATIVE SQUARE NUT TO BE 4" MIN. TO 12" MAX BELOW BOTTOM OF LID.
- 6. TRACER WIRE TO BE #10 STRANDED COPPER WITH WHITE INSULATION.



# CITY OF CLOVIS

## 4" TURBO WATER SERVICE

DWG NO.  
**W-11**

REF. STD. SPECIFICATIONS  
SECTION 66

APPROVED BY:

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SCALE: NTS

CITY ENGINEER

DATE:

10-05-09

01-07-16

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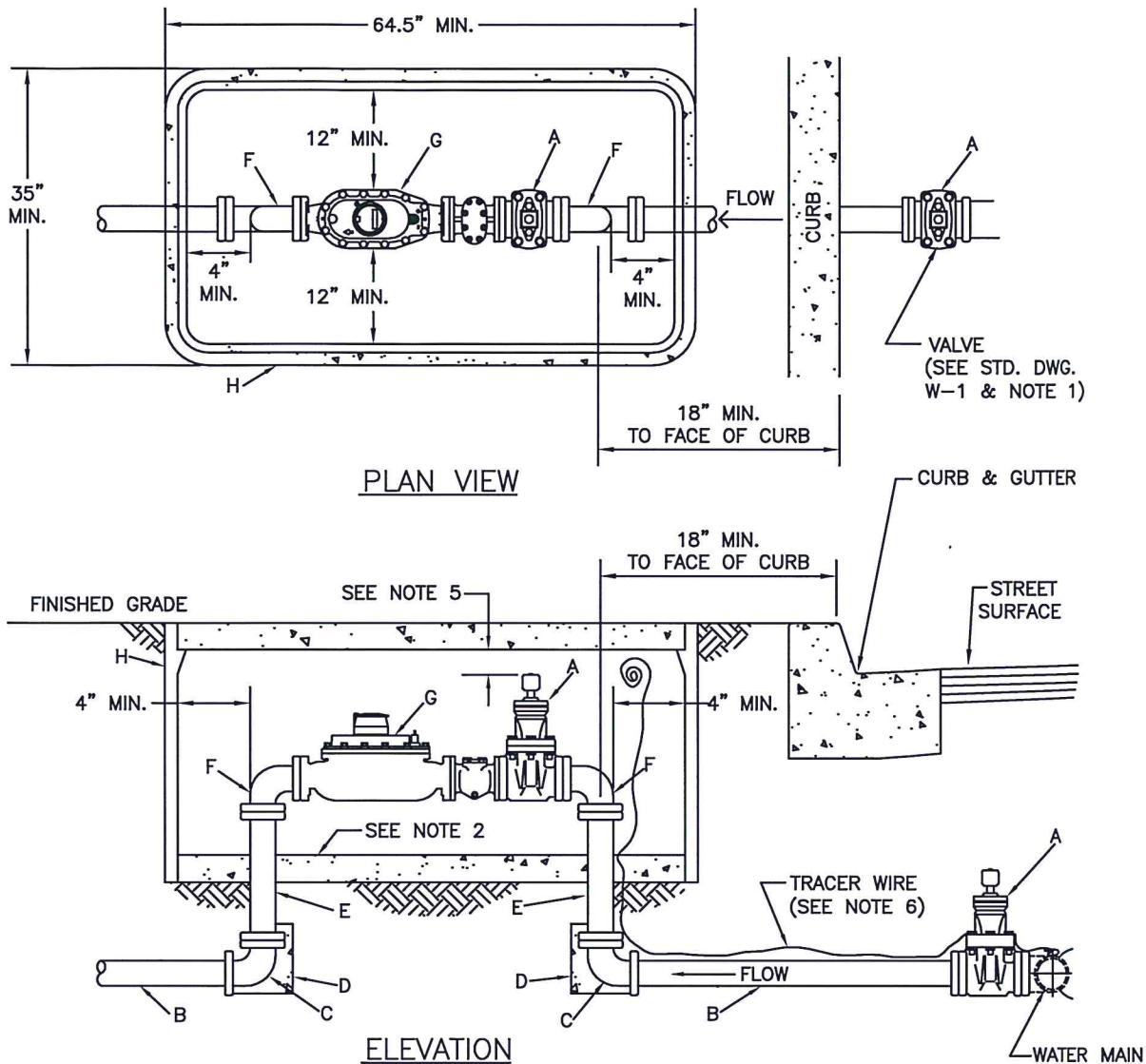
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#### LEGEND:

- A. 6" FLANGED GATE VALVE, CCW TO OPEN.
- B. 6" PVC C900 OR DUCTILE IRON PIPE CLASS 150 OR HIGHER.
- C. 6" DUCTILE IRON FLANGE x MJ ELBOW.
- D. THRUST BLOCK SEE STD. DWG. W-15.
- E. 6" DUCTILE IRON FLANGED SPOOL, LENGTH AS NEEDED.
- F. 6" DUCTILE IRON FLANGED ELBOW.
- G. FLANGED 6" TURBO METER AND WATER METER STRAINER (SEE NOTE 4).
- H. CHRISTY B52 BOX & B52M3 LID, SIZED TO FIT.

#### NOTES:

- 1. VALVES TO BE MUELLER A-2360 WITH 2" SQUARE NUTS, CCW TO OPEN.
- 2. 6" SEAL/BENCH WITH CONCRETE INSIDE OF VAULTS.
- 3. METER BOX IN SIDEWALK OR PLACE 3-1/2" THICK CL2 CONCRETE SLAB, 1' ON ALL SIDES OF BOX.
- 4. 27-1/4" GALVANIZED SPACER SHALL BE INSTALLED IN PLACE OF THE METER/ STRAINER (G).
- 5. TOP OF OPERATIVE SQUARE NUT TO BE 4" MIN. TO 12" MAX BELOW BOTTOM OF LID.
- 6. TRACER WIRE TO BE #10 STRANDED COPPER WITH WHITE INSULATION.



# CITY OF CLOVIS

## 6" TURBO WATER SERVICE

DWG NO.  
**W-12**

REF. STD. SPECIFICATIONS  
SECTION 66

SCALE: NTS

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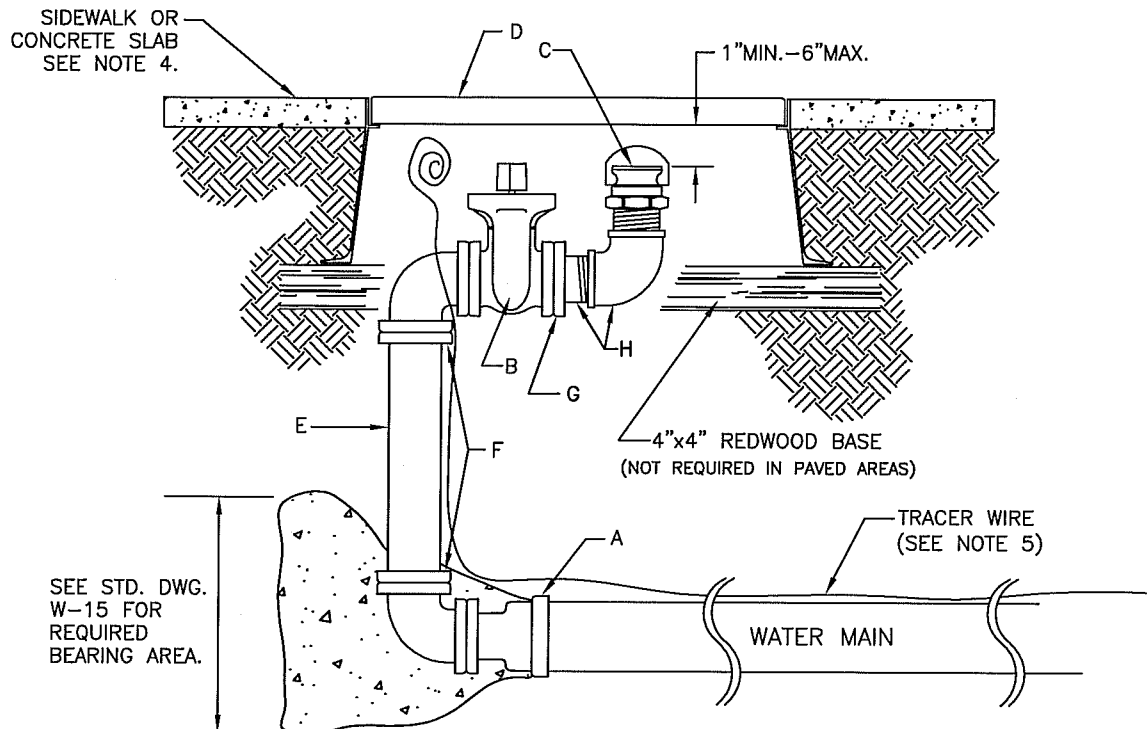
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#### LEGEND:

- A. DUCTILE IRON REDUCER, MJ TO FLANGED.
- B. GATE VALVE W/2" SQUARE METER WRENCH KEY FITTING, CCW TO OPEN. SEE SIZE SCHEDULE FOR VALVE AND PIPE SIZE.
- C. MALE QUICK-COUPLING HOSE ADAPTOR W/DUST CAP.
- D. SEE SIZE SCHEDULE FOR BLOW OFF BOX.
- E. ALL PIPE AND FITTINGS TO BE DUCTILE IRON, FLANGED.
- F. WELDED FLANGE OR E-Z FLANGE SERIES 1000 DUCTILE IRON FLANGE ADAPTER OR APPROVED EQUIVALENT.
- G. COMPANION FLANGE TO NPT.
- H. GALVANIZED PIPE AND ELBOW.

#### SIZE SCHEDULE

MAIN SIZE	BLOW-OFF SIZE	BOX TYPE
6"	4"	CHRISTY B36
8"	4"	CHRISTY B36
10"	4"	CHRISTY B36
12"	6"	CHRISTY B40
14"	6"	CHRISTY B40
16"	8"	CHRISTY B52

(FOR LARGER SIZE MAINS, SEE PLANS)

#### NOTES:

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS LISTED IN LEGEND.
2. ALL INSTALLATIONS ARE TO BE INSPECTED AND APPROVED BY CONSTRUCTION MANAGEMENT PRIOR TO POURING THRUST BLOCK.
3. THE CITY ENGINEER SHALL COMPUTE THE REQUIRED BEARING AREAS FOR CASES NOT COVERED HEREIN.
4. ALL BLOW-OFF BOXES IN DIRT OR LANDSCAPED AREAS SHALL BE SET IN A 2" THICK CL.2 CONCRETE SLAB MEASURING AT LEAST 1' ON ALL SIDES OF BOX.
5. TRACER WIRE TO BE #10 STRANDED COPPER, WITH WHITE INSULATION.
6. GALVANIZED PIPE BELOW GROUND TO BE DOUBLE WRAPPED WITH 10 MIL TAPE.



# CITY OF CLOVIS

## BLOW-OFF VALVE INSTALLATION

DWG NO.

W-13

REF. STD. SPECIFICATIONS  
SECTION 66

APPROVED BY:

CITY ENGINEER

DATE:

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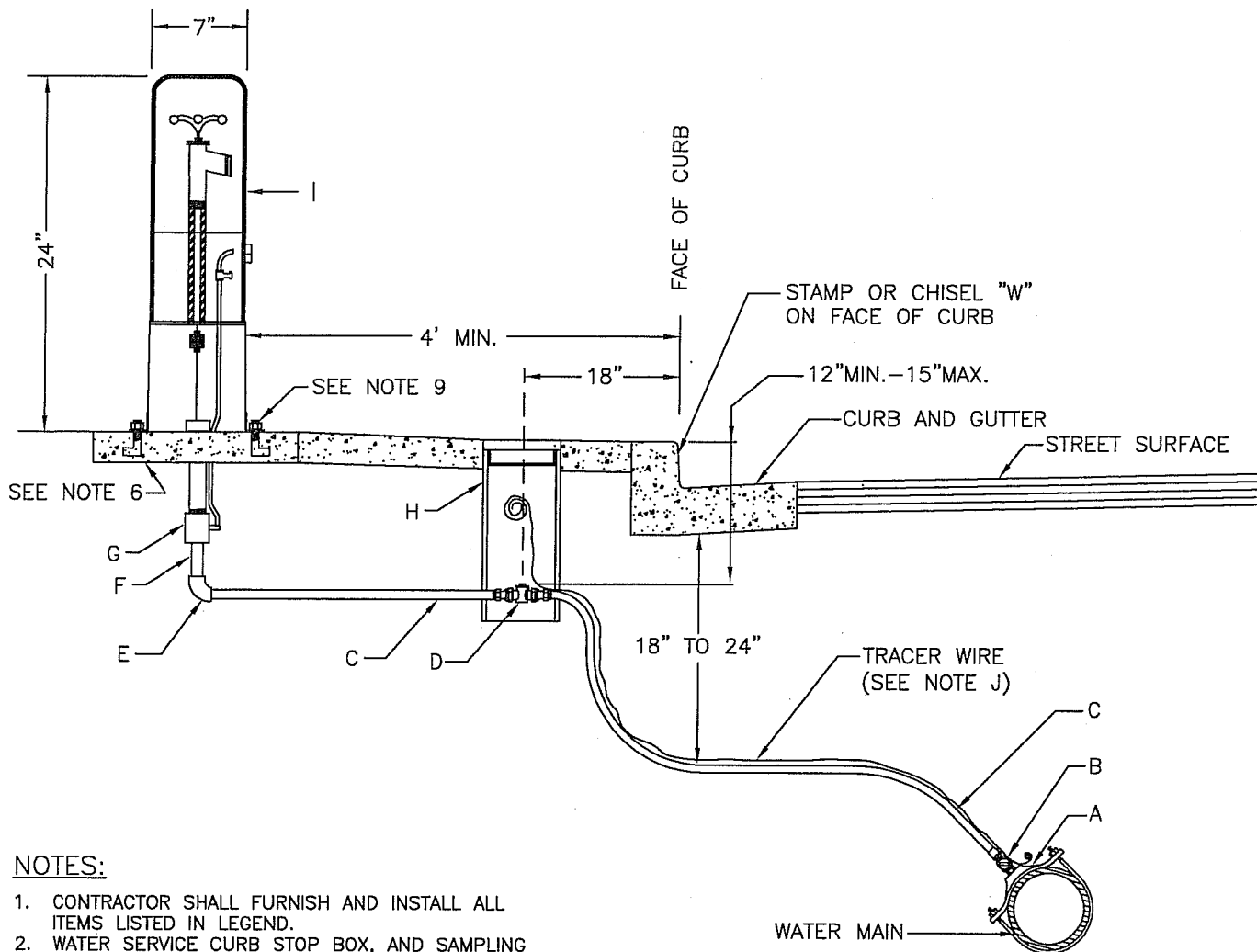
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SCALE: NTS

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#### NOTES:

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS LISTED IN LEGEND.
2. WATER SERVICE CURB STOP BOX, AND SAMPLING STATION INSTALLATION SHALL BE INSPECTED AND APPROVED BY CITY PRIOR TO SIDEWALK INSTALLATION.
3. ALL MATERIALS SHALL BE AS NOTED OR CITY APPROVED EQUAL.
4. ALL DIRT SHALL BE REMOVED FROM G5 BOX SO THAT THE SERVICE STOP IS FULLY EXPOSED.
5. ALL GALVANIZED PIPE AND FITTINGS SHALL BE DOUBLE WRAPPED WITH 10 MIL TAPE.
6. ALL CURB BOXES AND SAMPLING STATIONS IN DIRT OR LANDSCAPE AREAS SHALL BE SET IN A 3-1/2\"
7. G5 BOX AND SAMPLING STATION SHALL BE CLEARED OF ALL OTHER FACILITIES.
8. G5 BOX SHALL BE CENTERED OVER CURB STOP ASSEMBLY.
9. MOUNT STATION TO SLAB PER MANUFACTURER'S RECOMMENDATION.

#### LEGEND:

- A. USE DOUBLE STRAP STAINLESS STEEL BAND, CC AWNA TAPER THREAD (SEE STANDARD DRAWING W-5).
- B. 3/4\"
- C. 3/4\"
- D. 3/4\"
- E. 3/4\"
- F. 3/4\"
- G. 1\"
- H. CHRISTY NO. G5 BOX AND CAST IRON COVER OR APPROVED EQUAL; TO BE MARKED \"WATER\".
- I. ECLIPSE NO. 88 WC OR APPROVED EQUAL, WATER SAMPLING STATION.
- J. TRACER WIRE #10 STRANDED COPPER, WITH WHITE INSULATION.



## CITY OF CLOVIS

### WATER SAMPLING STATION

DWG NO.

W-14

REF. STD. SPECIFICATIONS  
SECTION 66

APPROVED BY:

CITY ENGINEER

DATE:

NO.

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SCALE: NTS

02-26-09

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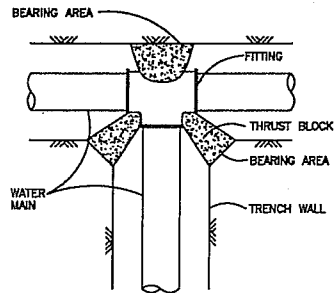
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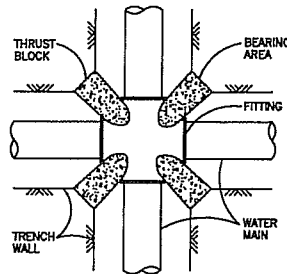
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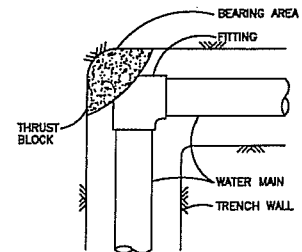
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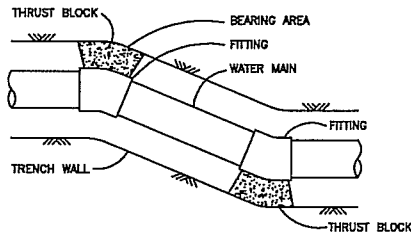
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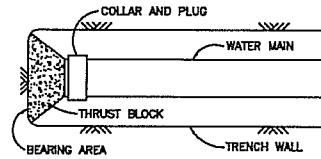
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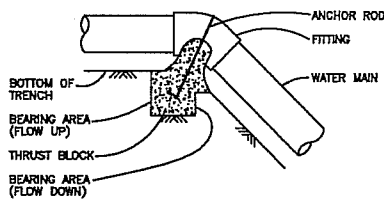
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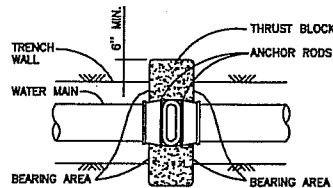
HORIZONTAL BEND



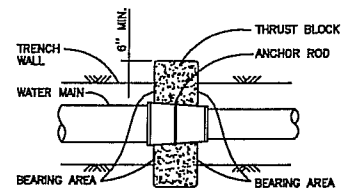
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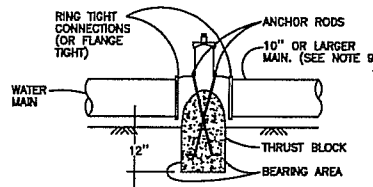
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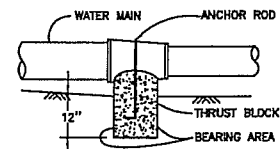
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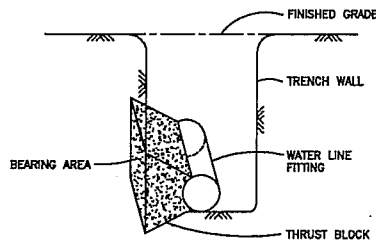
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ELEVATION  
VALVES



ELEVATION  
REDUCERS



TYPICAL FITTING SECTION

MINIMUM BEARING AREAS REQUIRED (SQ.FT)						
90° BEND	TEE*	90° BEND	45° BEND	22 1/2" BEND	11 1/8" BEND	VALVE
4" & 6"	3	5	3	1	1	0
8"	5	8	4	2	1	0
10"	8	12	7	4	2	4
12"	12	17	9	5	2	9

\* INCLUDES CROSSES, PLUGS, REDUCERS AND HYDRANTS.

#### NOTES:

1. ALL ANCHORS AND THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED SOIL.
2. THRUST BLOCK BEARING AREAS ARE BASED UPON A DESIGN WATER PRESSURE OF 150 P.S.I.; AND A SOIL BEARING STRENGTH OF 2000 P.S.I.
3. FOR LOOSE SAND, INCREASE BEARING AREA LISTED BY A FACTOR OF FOUR (4).
4. THE RATIO OF BEARING AREA WIDTH TO HEIGHT SHALL NOT EXCEED 1-1/2 TO 1.
5. CONCRETE SHALL BE CLASS 2, MINIMUM 2000 P.S.I. STRENGTH.
6. ANCHOR RODS TO BE NO. 4 REBAR, WITH 3" END BEND, EMBEDDED A MIN. OF 8" INTO THRUST BLOCK.
7. PLACE 30 LB. FELT BETWEEN ALL FITTINGS AND THRUST BLOCKS.
8. THE CITY ENGINEER SHALL COMPUTE THE REQUIRED BEARING AREAS FOR CASES NOT COVERED HEREIN.
9. THRUST BLOCKS FOR VALVES ARE REQUIRED ONLY WHEN THE WATER MAIN AND VALVE IS EQUAL TO OR GREATER THAN 10" IN DIAMETER.
10. RESTRAINED JOINTS MAY BE APPROVED BY CIT ENGINEER IN LIEU OF CERTAIN THRUST BLOCKS.



# CITY OF CLOVIS

## CONCRETE THRUST BLOCKS

DWG NO.  
**W-15**

REF. STD. SPECIFICATIONS  
SECTION 66

APPROVED BY:

CITY ENGINEER

DATE:

NO.

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02-26-09

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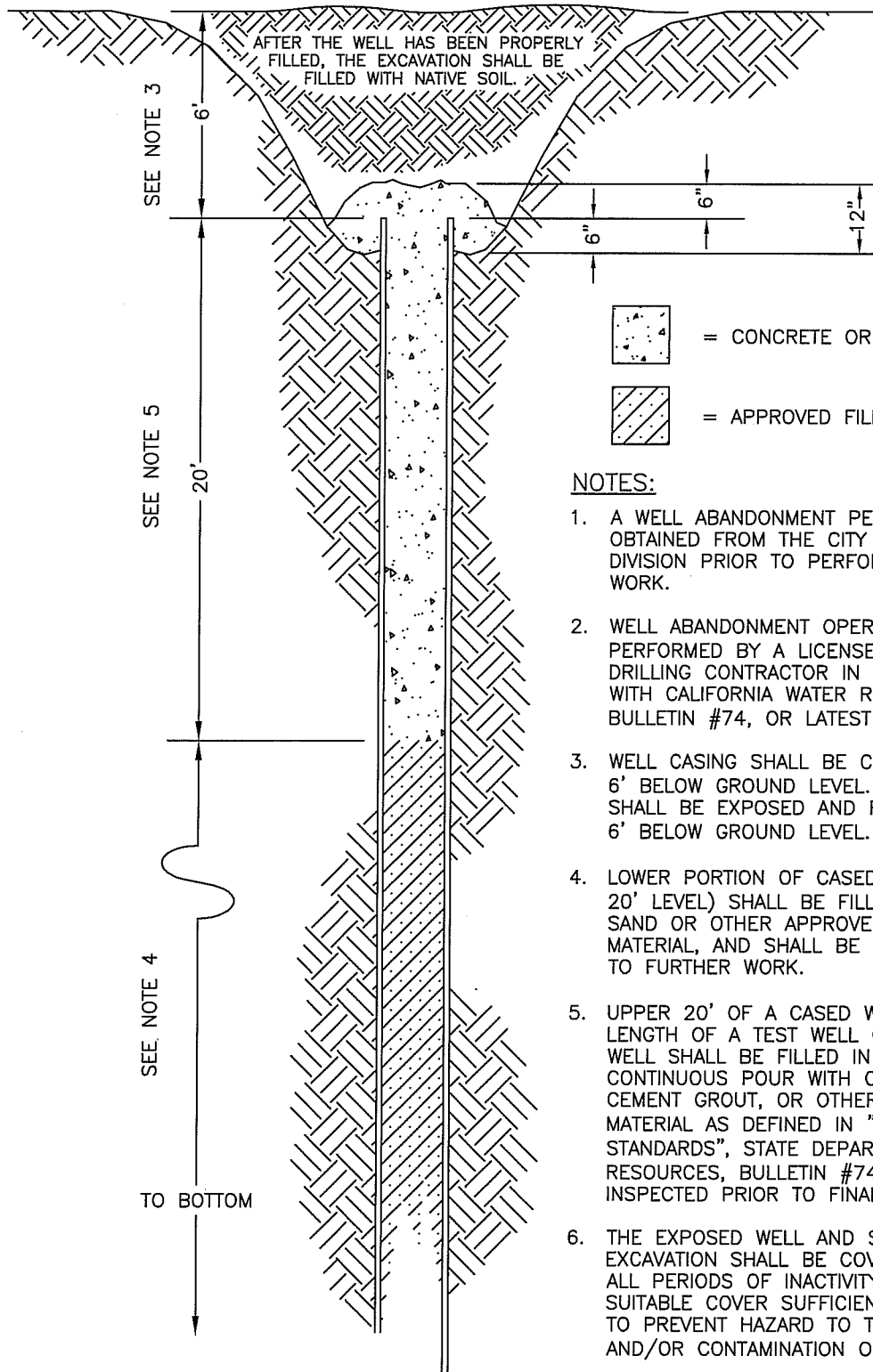
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#### NOTES:

1. A WELL ABANDONMENT PERMIT SHALL BE OBTAINED FROM THE CITY BUILDING DIVISION PRIOR TO PERFORMANCE OF WORK.
2. WELL ABANDONMENT OPERATIONS SHALL BE PERFORMED BY A LICENSED (C-57) WELL DRILLING CONTRACTOR IN ACCORDANCE WITH CALIFORNIA WATER RESOURCES BULLETIN #74, OR LATEST REVISION.
3. WELL CASING SHALL BE CUT OFF AT LEAST 6' BELOW GROUND LEVEL. UNCASSED WELLS SHALL BE EXPOSED AND FILLED AT LEAST 6' BELOW GROUND LEVEL.
4. LOWER PORTION OF CASSED WELLS (BELOW 20' LEVEL) SHALL BE FILLED WITH CLEAN SAND OR OTHER APPROVED NONORGANIC MATERIAL, AND SHALL BE INSPECTED PRIOR TO FURTHER WORK.
5. UPPER 20' OF A CASSED WELL OR ENTIRE LENGTH OF A TEST WELL OR UNCASSED WELL SHALL BE FILLED IN ONE CONTINUOUS POUR WITH CONCRETE CEMENT GROUT, OR OTHER IMPERVIOUS MATERIAL AS DEFINED IN "WATER WELL STANDARDS", STATE DEPARTMENT OF WATER RESOURCES, BULLETIN #74, AND INSPECTED PRIOR TO FINAL COVERING.
6. THE EXPOSED WELL AND SURROUNDING EXCAVATION SHALL BE COVERED DURING ALL PERIODS OF INACTIVITY WITH A SUITABLE COVER SUFFICIENTLY ANCHORED TO PREVENT HAZARD TO THE PUBLIC AND/OR CONTAMINATION OF THE WELL.



# CITY OF CLOVIS

## WATER WELL ABANDONMENT

DWG NO.

**W-16**

REF: WATER WELL STDS.,  
CALIF. WATER RESOURCES  
BULLETIN #74

APPROVED BY:

CITY ENGINEER

DATE:

1/17/13

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SCALE: NTS

02-26-09

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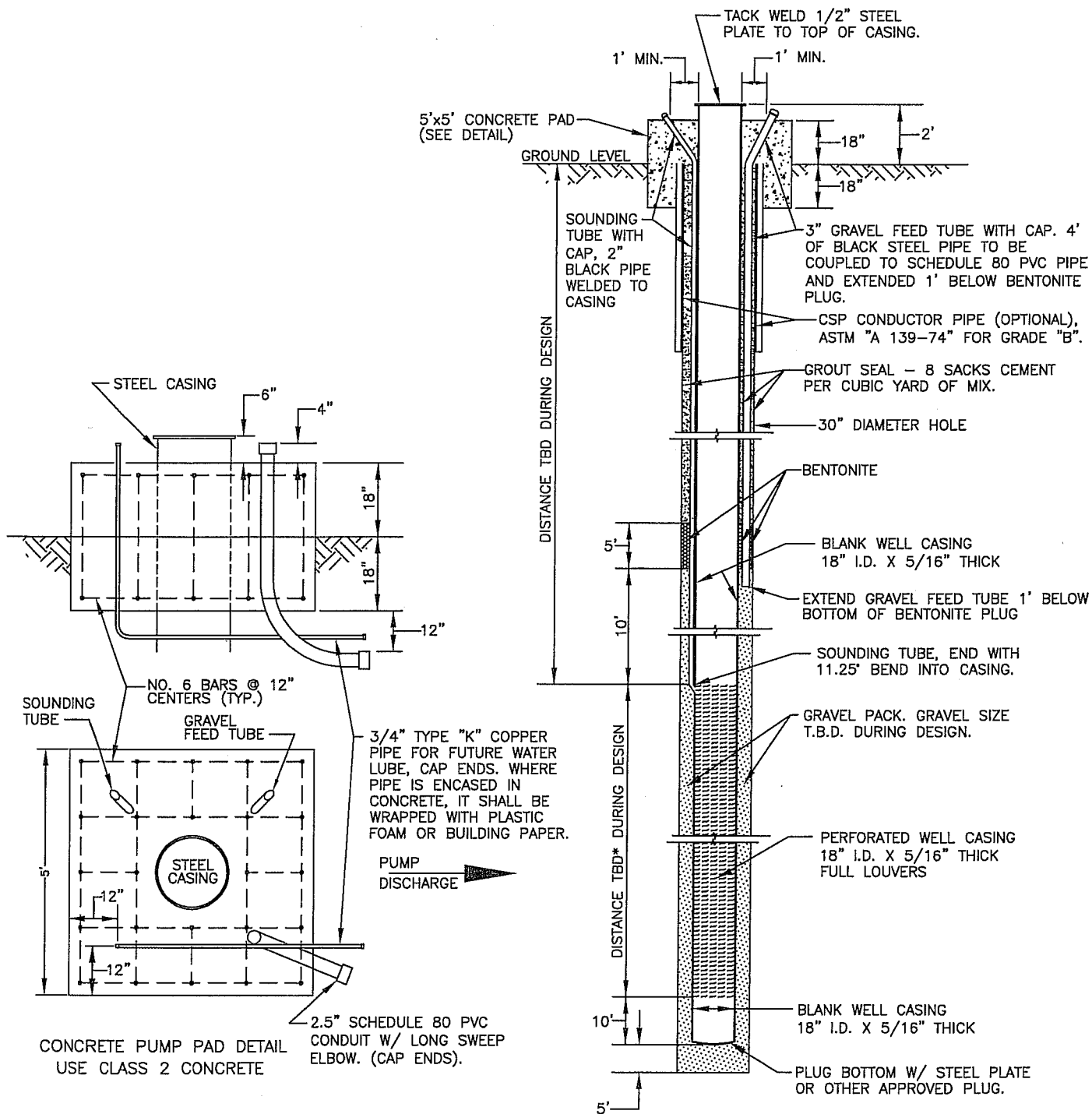
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\*TBD = TO BE DETERMINED



# CITY OF CLOVIS

DWG NO.

W-17

## TYPICAL MUNICIPAL WATER WELL DESIGN

STD. REF: N.A.

APPROVED BY:

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APPROVALS

SCALE: NTS

CITY ENGINEER

02-26-09

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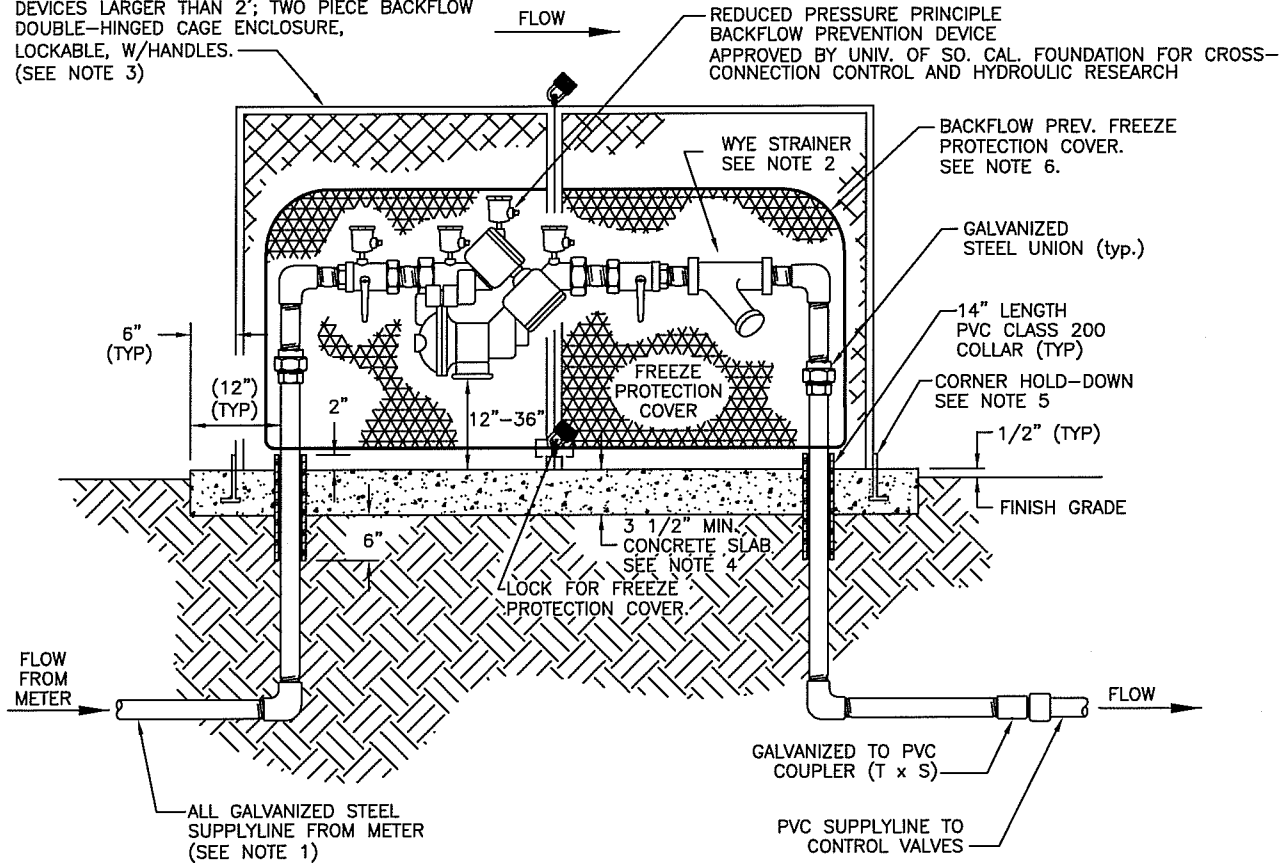
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PREVENTION DEVICES 2' AND SMALLER; 1-PIECE SINGLE-HINGED CAGE. (SEE NOTES 3 & 7)  
DEVICES LARGER THAN 2'; TWO PIECE BACKFLOW DOUBLE-HINGED CAGE ENCLOSURE, LOCKABLE, W/HANDLES. (SEE NOTE 3)



#### NOTES:

1. ALL GALVANIZED STEEL PIPE AND FITTINGS BELOW GRADE TO BE PRIMED AND WRAPPED WITH A 50 PERCENT OVERLAP OF 10 MIL CORROSION PROTECTION TAPE. (SCOTCHRAP OR EQUAL)
2. 150 MESH WYE STRAINER WITH BALL VALVE REQUIRED FOR DRIP OR LOW FLOW APPLICATIONS. ROTATE STRAINER 30 DEGREES DOWNWARD FROM HORIZONTAL.
3. SIZE OF BACKFLOW PREVENTER SHALL DICTATE THE SIZE OF THE ENCLOSURE. CONSULT ENCLOSURE MANUFACTURER'S LITERATURE TO DETERMINE CORRECT MODEL NUMBER.
4. SIZE OF THE ENCLOSURE SHALL DICTATE THE SIZE OF THE CONCRETE PAD, WHICH SHALL BE 15 cm (6") LARGER, ON ALL SIDES, THAN THE ENCLOSURE. THE PAD SHALL BE SUFFICIENTLY THICK TO EXTEND 8 cm (3") MIN. BELOW GRADE ON ALL SIDES. TOP OF PAD TO BE SLOPED TO DRAIN.
5. CORNER HOLD-DOWN ASSEMBLIES FOR ENCLOSURE SHALL BE EMBEDDED IN CONCRETE PAD PER MANUFACTURER'S SPECS.
6. A BACKFLOW PREVENTER FREEZE PROTECTION COVER SHALL BE INSTALLED OVER THE BACKFLOW PREVENTER.
7. WHEN FABRICATING 1-PIECE SINGLE-HINGED CAGE ALLOW FOR FREEZE PROTECTION COVER CLEARANCE WHEN OPENING AND CLOSING CAGE.

#### IMPORTANT

THE BACKFLOW PREVENTION ASSEMBLY SHALL BE TESTED AND APPROVED BY AN APPROVED AWWA OR ABPA CERTIFIED TESTER WITHIN FIVE (5) DAYS OF INSTALLATION WITH THE RESULTS SENT TO THE CITY BACKFLOW PROGRAM COORDINATOR VIA:

MAIL TO: 155 N. SUNNYSIDE  
CLOVIS, CA 93611  
FAX: (559) 324-2862  
IN PERSON: CITY OF CLOVIS PUBLIC  
UTILITIES DEPT.  
155 N. SUNNYSIDE,  
CLOVIS, CA  
2ND FLOOR - ADMIN. BLDG.

A LIST OF THE CITY'S APPROVED BACKFLOW TESTERS MAY BE OBTAINED THROUGH THE CITY WEBSITE AT:  
[www.cityofclovis.com](http://www.cityofclovis.com) UNDER THE PUBLIC UTILITIES DEPARTMENT.



# CITY OF CLOVIS

## CITY BACKFLOW PREVENTION DEVICE

DWG NO.

W-18

REF: STD. SPECS  
SECTION 21, LANDSCAPE  
IRRIGATION SYSTEMS

SCALE: NTS

DRAWN BY: JA

SHEET 1 OF 1

APPROVED BY:

CITY ENGINEER

DATE:

NO.

REVISED

BY

APPROVALS

01-19-11

BGJ

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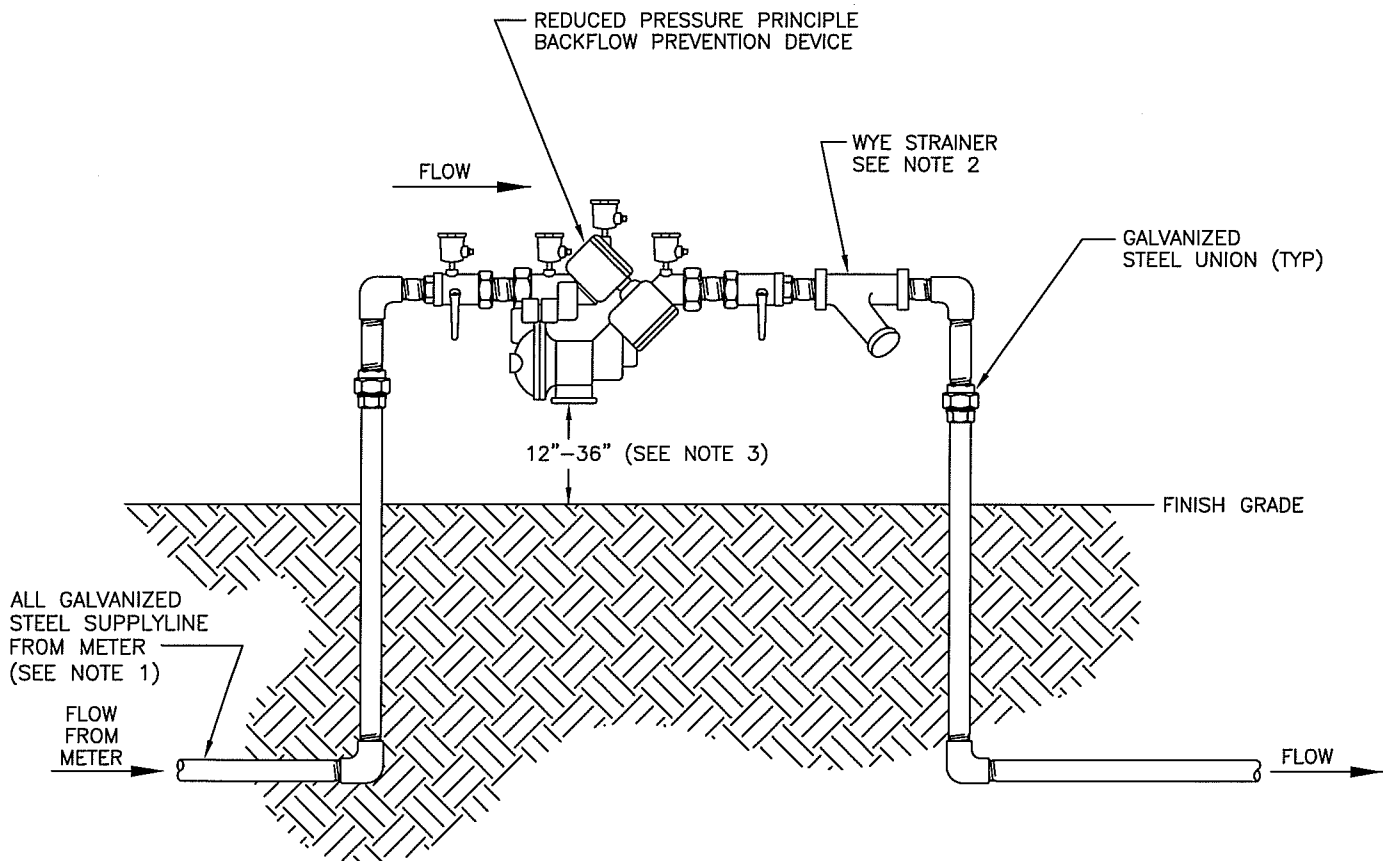
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#### NOTES:

1. ALL GALVANIZED STEEL PIPE AND FITTINGS BELOW GRADE TO BE PRIMED AND WRAPPED WITH A 50 PERCENT OVERLAP OF 10 MIL CORROSION PROTECTION TAPE. (SCOTCHRAP OR EQUAL)
2. 150 MESH WYE STRAINER WITH BALL VALVE REQUIRED FOR DRIP OR LOW FLOW APPLICATIONS. ROTATE STRAINER 30 DEGREES DOWNWARD FROM HORIZONTAL.
3. A MINIMUM CLEARANCE OF 12" FROM THE BOTTOM OF BACKFLOW DEVICE (RELIEF VALVE OPENING) AND TOP OF GRADE SHALL BE KEPT AT ALL TIMES WITH A MAXIMUM CLEARANCE OF 36".
4. CONCRETE PAD IS RECOMMENDED, BUT NOT REQUIRED. IF INSTALLING A CONCRETE PAD, THE PAD SHALL BE CLASS 2 CONCRETE SUFFICIENTLY THICK TO EXTEND 3" MIN. BELOW GRADE ON ALL SIDES. TOP OF PAD TO BE SLOPED TO DRAIN.

#### IMPORTANT

THE BACKFLOW PREVENTION ASSEMBLY SHALL BE TESTED AND APPROVED BY AN APPROVED AWWA OR ABPA CERTIFIED TESTER WITHIN FIVE (5) DAYS OF INSTALLATION WITH THE RESULTS SENT TO THE CITY BACKFLOW PROGRAM COORDINATOR VIA:

MAIL TO: 155 N. SUNNYSIDE  
CLOVIS, CA 93611  
FAX: (559) 324-2862  
IN PERSON: CITY OF CLOVIS PUBLIC  
UTILITIES DEPT.  
155 N. SUNNYSIDE,  
CLOVIS, CA  
2ND FLOOR - ADMIN. BLDG.

A LIST OF THE CITY'S APPROVED BACKFLOW TESTERS MAY BE OBTAINED THROUGH THE CITY WEBSITE AT:  
[www.cityofclovis.com](http://www.cityofclovis.com) UNDER THE PUBLIC UTILITIES DEPARTMENT.



# CITY OF CLOVIS

## PRIVATE BACKFLOW PREVENTION DEVICE

DWG NO.

W-19

STANDARD REF:  
N.A.

APPROVED BY:

CITY ENGINEER

DATE:

NO.

REVISED

BY

APPROVALS

01-19-11

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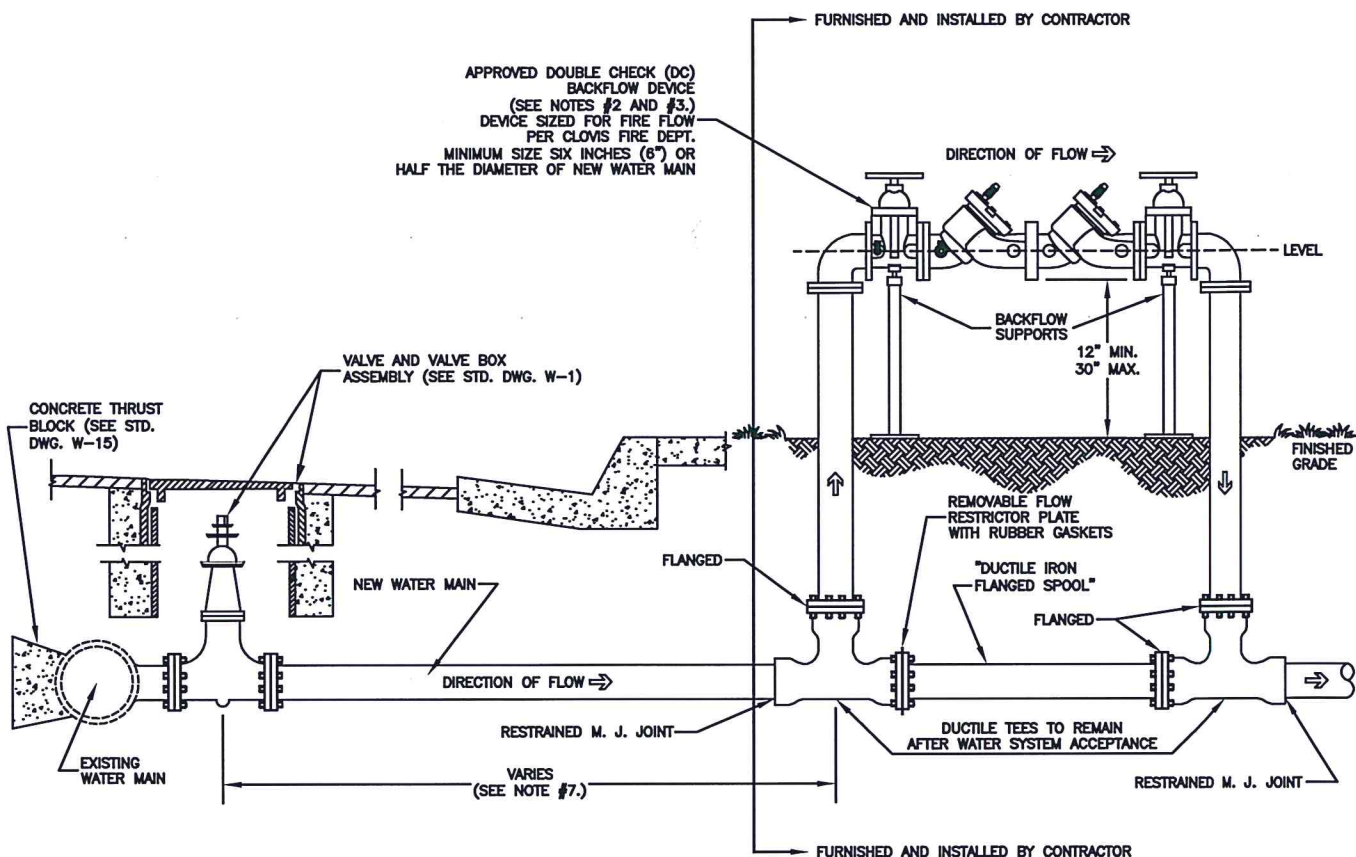
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SHEET 1 OF 1



## GENERAL NOTES

1. ANY DEVIATION FROM THESE REQUIREMENTS SHALL BE APPROVED BY THE PUBLIC UTILITIES DEPT. PRIOR TO INSTALLATION.
2. DOUBLE CHECK (DC) BACKFLOW DEVICE WITH ASSOCIATED PIPING, VALVES, TEES, AND FITTINGS SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR. DEVICE SIZED FOR FIRE FLOW PER CLOVIS FIRE DEPT. MINIMUM SIZE SIX INCHES (6") OR HALF THE DIAMETER OF NEW WATER MAIN. REDUCED PRESSURE (RP) BACKFLOW DEVICE MAY BE USED IN LIEU OF A DOUBLE CHECK (DC) BACKFLOW DEVICE.
3. RECOMMENDED DOUBLE CHECK BACKFLOW DEVICES: WILKINS MODEL 350 SERIES, FEBCO MODEL LF850, OR APPROVED EQUAL BY THE UNIVERSITY OF SOUTHERN CALIFORNIA (U.S.C.) FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH.
4. NEW SYSTEM OF MAINS, HYDRANTS AND SERVICES SHALL BE PRESSURE TESTED AND SHALL PASS STANDARD BACTERIAL TESTING PRIOR TO FINAL CONNECTION TO EXISTING CITY WATER SYSTEM.
5. WET TIE TO EXISTING WATER SYSTEM WILL BE PERFORMED BY CONTRACTOR UNDER THE OBSERVATION OF PUBLIC UTILITIES WATER DIVISION PERSONNEL.
6. UPON PUBLIC UTILITIES DEPT. ACCEPTANCE OF THE COMPLETE WATER SYSTEM, CONTRACTOR SHALL REMOVE THE DOUBLE CHECK (DC) BACKFLOW DEVICE, FLOW RESTRICTOR PLATE, ASSOCIATED PIPING, VALVES, AND FITTINGS. DUCTILE TEES TO REMAIN IN PLACE BLIND FLANGED BY CONTRACTOR.
7. DISTANCE VARIES PER INSTALLATION, DISTANCE REQUIRES PUBLIC UTILITIES DEPT. APPROVAL.



# CITY OF CLOVIS

## TEMPORARY BACKFLOW DEVICE PROTECTION FOR NEW WATER MAIN CONNECTIONS

DWG NO.

W-20

REF. STD. SPECIFICATIONS  
SECTION 66

APPROVED BY:

CITY ENGINEER

DATE:

10-2-17

NO.

REVISED

BY

APPROVALS

SCALE: NTS

04-08-14

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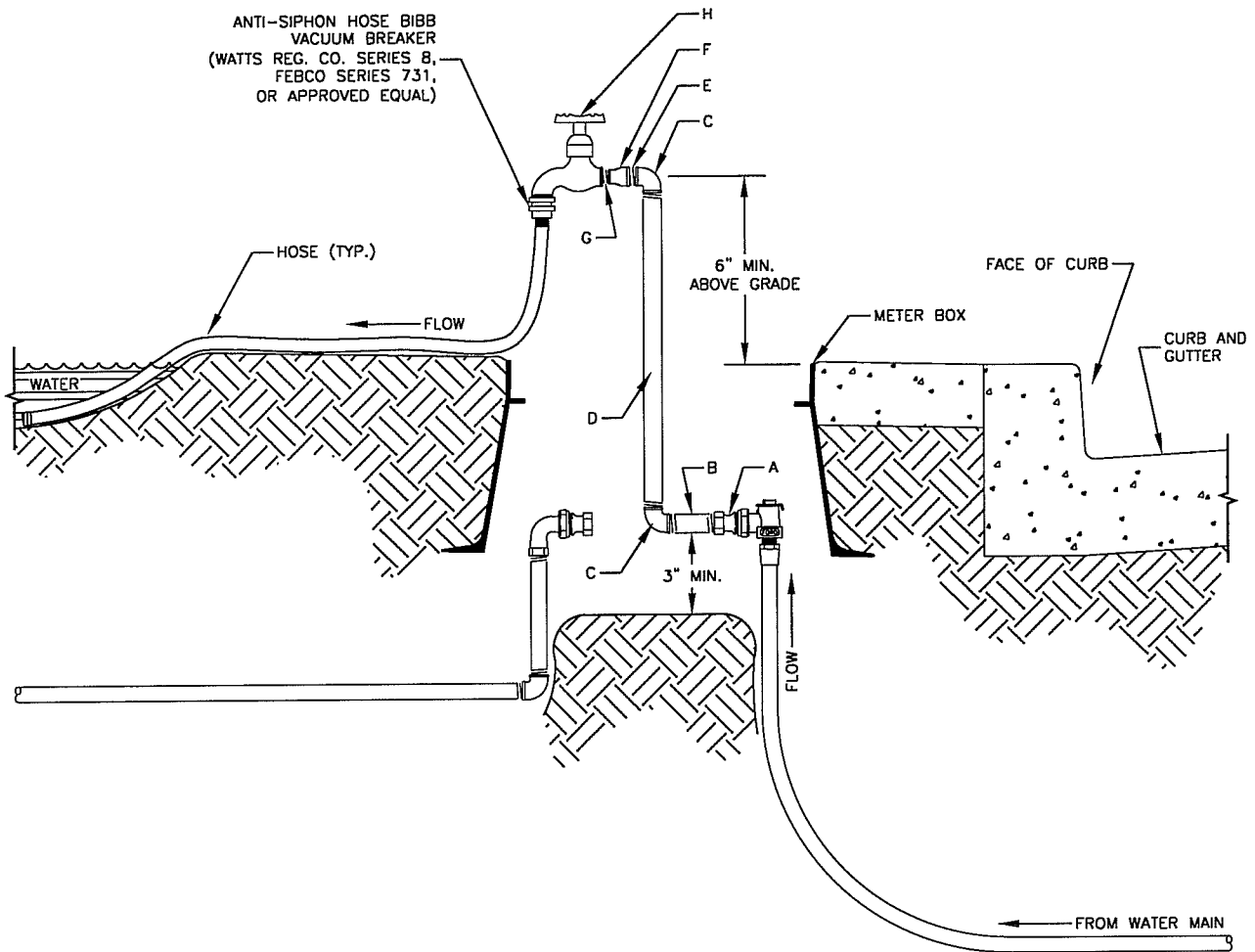
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SHEET 1 OF 1



### LEGEND:

- A. METER IDLER TO PIPE THREAD ADAPTER
- B. 1" x 5" GALVANIZED PIPE INSTALLED LEVEL
- C. 1" GALVANIZED 90° ELBOW
- D. 1" GALVANIZED PIPE, LENGTH VARIES
- E. 1" DIAMETER NIPPLE
- F. 1" TO 3/4" REDUCER
- G. 3/4" DIAMETER NIPPLE
- H. 3/4" HOSE BIB (TYP.)

### NOTES:

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS LISTED IN LEGEND.
2. SEE STANDARD W-5 FOR WATER SERVICE.
3. WATER SERVICE AND METER BOX INSTALLATION SHALL BE INSPECTED AND APPROVED BY CITY PRIOR TO SIDEWALK INSTALLATION.
4. ALL MATERIALS SHALL BE AS NOTED OR CITY APPROVED EQUAL.
5. A CLEAR SPACE OF AT LEAST 3" SHALL BE MAINTAINED BETWEEN SPACER ASSEMBLY (B) AND TOP OF DIRT INSIDE BOX.



## CITY OF CLOVIS

### ANTI-SIPHON HOSE BIBB VACUUM BREAKER FOR TEMPORARY HOSE CONNECTION

DWG NO.

**W-21**

REF. STD. SPECIFICATIONS  
SECTION 66

APPROVED BY:

CITY ENGINEER

DATE:

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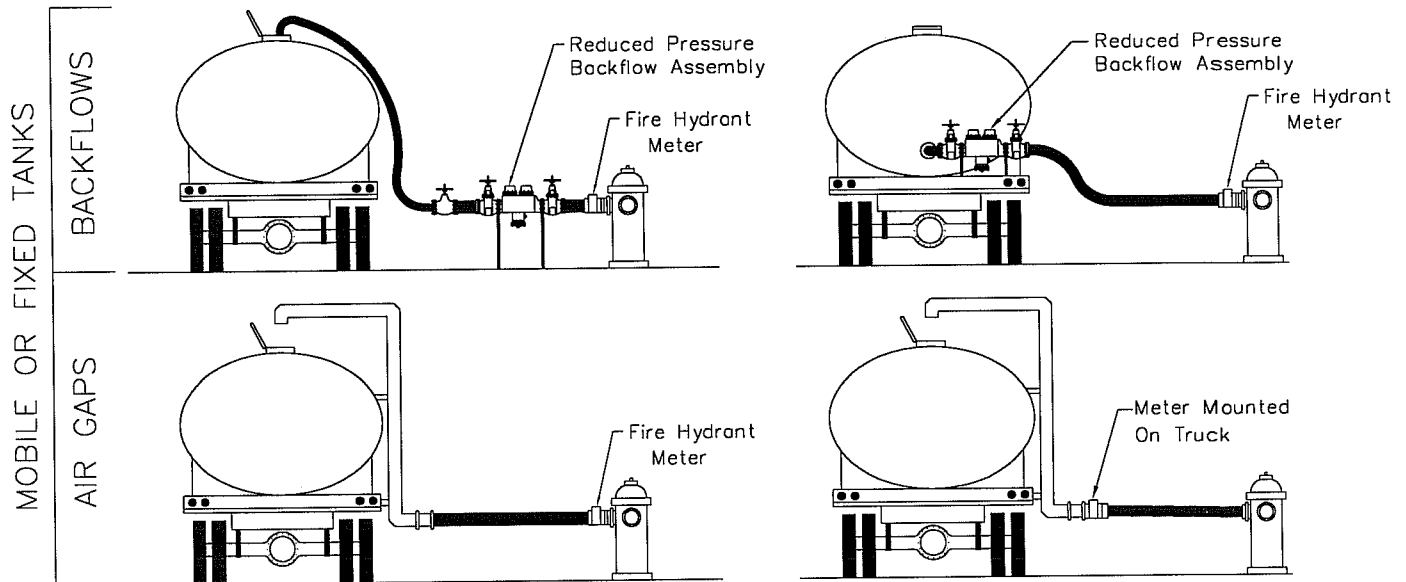
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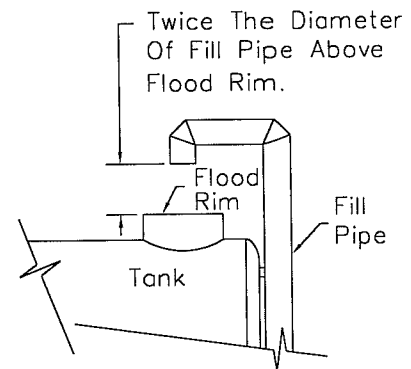
- ALL CONNECTIONS MUST BE METERED WITH A CITY OF CLOVIS METER.
- ALL CONNECTIONS MUST BE PROTECTED BY AN AIR GAP OR R.P. BACKFLOW DEVICE.




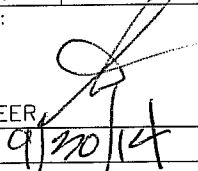
**NOTES: PER CITY OF CLOVIS MUNICIPAL CODE.**

(A) PERMITS TO USE. NO PERSON SHALL TAKE WATER THROUGH OR FROM ANY FIRE HYDRANT IN THE CITY WITHOUT A VALID PERMIT AND SHALL FIRST FILE WITH THE CITY AN APPLICATION SPECIFYING THE HYDRANT AND THE TIME DESIRED TO TAKE SUCH WATER. PERMITS MAY BE REFUSED ANY PERSON WHO MAY BE INDEBTED TO THE CITY FOR WATER PREVIOUSLY RECEIVED BY SUCH PERSON FROM THE CITY.

(B) ANY PERSON TAKING WATER THROUGH OR FROM ANY CITY FIRE HYDRANT SHALL UTILIZE A HYDRANT METER RENTED FROM THE PUBLIC UTILITIES DEPARTMENT ACCORDING TO THE PERMIT TERMS. AN APPROPRIATE BACKFLOW DEVICE SHALL BE INSTALLED DOWNSTREAM FROM THE HYDRANT METER AS DETERMINED BY THE CITY.



AIR GAP PIPE DETAIL

	<h1 style="margin: 0;">CITY OF CLOVIS</h1>				DWG NO. <h2 style="margin: 0;">W-22</h2>	
	<h3 style="margin: 0;">PORTABLE WATER TANK FIRE HYDRANT REGULATIONS</h3>					
APPROVED BY: 	NO.	REVISED	BY	APPROVALS		SCALE: NTS
CITY ENGINEER		09-29-14	BGJ	CM		DRAWN BY: BGJ
DATE: 9/20/14		09-18-14	BGJ	DRU		SHEET 1 OF 1
		09-24-14	BGJ	PUD		