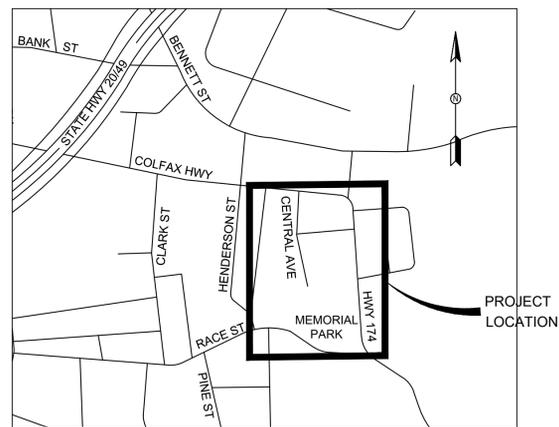
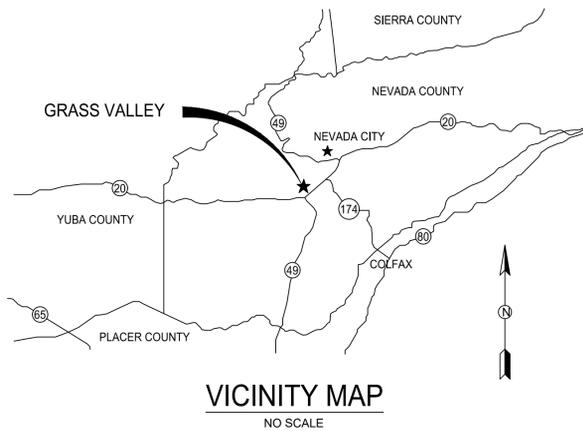


CITY OF GRASS VALLEY  
ENGINEERING DIVISION  
IMPROVEMENT PLANS FOR

# CDBG MEMORIAL PARK FACILITIES IMPROVEMENTS PROJECT

PROJECT NO. 20-05



**CONSTRUCTION LEGEND:**

|  |                             |
|--|-----------------------------|
|  | STATION LINE                |
|  | (E) CURB; DIKE; DRIVEWAY    |
|  | (E) WALL                    |
|  | (E) FENCE                   |
|  | LOT/ROW LINE                |
|  | EASEMENT LINE               |
|  | (E) GAS                     |
|  | (E) SEWER AND SIZE          |
|  | (E) STORM DRAIN AND SIZE    |
|  | (E) ELECTRIC                |
|  | (E) WATER                   |
|  | (E) CONTOUR LINES           |
|  | DRAINAGE INLET              |
|  | FIRE HYDRANT                |
|  | WATER METER BOX             |
|  | MANHOLE (SS, SD, TEL, ELEC) |
|  | VALVE (GAS, TEL, ARV, WTR)  |
|  | GUY POLE                    |
|  | GUY WIRE                    |
|  | LIGHT POST                  |
|  | POLE                        |
|  | SINGLE POLE SIGN            |
|  | MAILBOX                     |
|  | TREE                        |
|  | (E) SPOT ELEVATION          |
|  | DETAIL NO / PLAN SHEET      |
|  | CONSTRUCTION KEYNOTE        |

**SHEET INDEX:**

- |  |                                     |
|--|-------------------------------------|
| 1. TITLE SHEET                           | 10. PARK DEMOLITION PLAN            |
| 2. POOL DEMOLITION PLAN                  | 11. PARK WATER LINE REPLACEMENT     |
| 3. POOL GRADING PLAN                     | 12. PARK FACILITIES CONSTRUCTION I  |
| 4. POOL UTILITY PLAN                     | 13. PARK FACILITIES CONSTRUCTION II |
| 5. LAP POOL DETAIL & SECTIONS            | 14. DETAILS I                       |
| 6. ACTIVITY POOL DETAIL & SECTIONS       | 15. DETAILS II                      |
| 7. MECHANICAL BUILDING DEMO & STRUCTURAL | 16. DETAILS III                     |
| 8. MECHANICAL BUILDING & EQUIPMENT       | 17. DETAILS IV                      |
| 9. POOL PARKING LOT AND VICINITY PLAN    |                                     |

**ABBREVIATIONS:**

|                              |                              |
|------------------------------|------------------------------|
| AB AGGREGATE BASE            | PL PROPERTY LINE             |
| AC ASPHALT CONCRETE          | P PROPOSED                   |
| BOW BACK OF SIDEWALK         | PSI POUNDS PER SQUARE INCH   |
| C&G CURB AND GUTTER          | PUE PUBLIC UTILITY EASEMENT  |
| CF CUBIC FOOT                | PVC POLYVINYL CHLORIDE       |
| CL CENTERLINE                | PVMT PAVEMENT                |
| CY CUBIC YARD                | R RADIUS                     |
| E ELECTRIC                   | RCP REINFORCED CONCRETE PIPE |
| (E) EXISTING                 | RW RETAINING WALL            |
| ELEV ELEVATION               | ROW RIGHT OF WAY             |
| EOP EDGE OF PAVEMENT         | SD STORM DRAIN               |
| FL FLOW LINE                 | SF SQUARE FOOT               |
| FT FEET                      | SY SQUARE YARD               |
| FTG FOOTING                  | ST STREET                    |
| G GAS                        | STA STATION                  |
| ID INSIDE DIAMETER           | STD STANDARD                 |
| IE INVERT ELEVATION          | SW SIDEWALK                  |
| L LEFT                       | SS SANITARY SEWER            |
| LF LINEAR FOOT               | TBC TOP BACK OF CURB         |
| MAX MAXIMUM                  | TBM TEMPORARY BENCHMARK      |
| MH MANHOLE                   | TBW TOP BACK OF WALK         |
| MIN MINIMUM                  | TFC TOP FACE OF CURB         |
| MISC MISCELLANEOUS           | TC TOP OF CURB               |
| NO NUMBER                    | TP TELEPHONE POLE            |
| NTS NOT TO SCALE             | TS TRAFFIC SIGNAL            |
| OD OUTSIDE DIAMETER          | TW TOP OF WALK               |
| PCC PORTLAND CEMENT CONCRETE | TYP TYPICAL                  |

**UTILITY/EMERGENCY CONTACTS:**

|                              |  |              |
|------------------------------|--|--------------|
| WATER/SEWER/<br>STORM DRAIN: | CITY OF GRASS VALLEY<br>125 E MAIN ST GRASS VALLEY, CA 95945         | 530-274-4350 |
| FIRE PROTECTION:             | CITY OF GRASS VALLEY<br>125 E MAIN ST GRASS VALLEY, CA 95945         | 530-274-4370 |
| ELECTRICITY/GAS:             | PG&E<br>788 TAYLORVILLE RD, GRASS VALLEY, CA 95945                   | 530-477-3260 |
| TELEVISION:                  | COMCAST<br>427 EATON RD, CHICO, CA 95973                             | 530-206-6172 |
| PHONE:                       | AT&T<br>12824 EARHART DRIVE, AUBURN, CA 95602                        | 530-888-2031 |
| WATER:                       | NEVADA IRRIGATION DISTRICT<br>1036 W MAIN ST, GRASS VALLEY, CA 95945 | 530-273-6185 |

**NOTES:**

- THE CONTRACTOR SHALL POSSESS A VALID CALIFORNIA CLASS "A" CONTRACTOR'S LICENSE, OR A COMBINATION OF THE FOLLOWING CLASSES: C-5 - FRAMING AND ROUGH CARPENTRY CONTRACTOR, C-8 - CONCRETE CONTRACTOR, C10 - ELECTRICAL CONTRACTOR, C12 - EARTHWORK AND PAVING CONTRACTORS, C13 - FENCING CONTRACTOR, C21 - BUILDING MOVING/DEMOLITION CONTRACTOR, C27 - LANDSCAPING CONTRACTOR, C29 - MASONRY CONTRACTOR, C33 - PAINTING AND DECORATING CONTRACTOR, C36 - PLUMBING CONTRACTOR, C39 - ROOFING CONTRACTOR, C50 - REINFORCING STEEL CONTRACTOR, C53 - SWIMMING POOL CONTRACTOR, D-63 CONSTRUCTION CLEANUP CONTRACTOR, AND ALL OTHER CLASSES REQUIRED BY THE CATEGORIES AND TYPES OF WORK INCLUDED IN THE CONTRACT AT THE TIME OF THE BID AWARD. ALL LICENSES SHALL REMAIN IN EFFECT THROUGHOUT THE TERM OF THE CONTRACT.
- THE CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO LATEST EDITIONS OF THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND STANDARD PLANS, THE IMPROVEMENT STANDARDS AND STANDARD DRAWINGS OF THE CITY OF GRASS VALLEY AND THE CALIFORNIA MUTCD. IN CASE OF CONFLICT, REFER TO THE PROJECT SPECIAL PROVISIONS FOR ORDER OF PRECEDENCE.
- THE CITY OF GRASS VALLEY HAS MADE EVERY EFFORT TO SHOW LOCATIONS OF ANY AND ALL EXISTING SURFACE AND SUBSURFACE STRUCTURES. HOWEVER, ACTUAL FIELD CONDITIONS AND LOCATIONS CAN VARY CONSIDERABLY FROM PLAN LOCATIONS. THEREFORE, THE CITY OF GRASS VALLEY CANNOT, AND DOES NOT, ASSUME RESPONSIBILITY OF THE EXISTENCE OR LOCATION OF ANY STRUCTURE SUCH AS, BUT NOT LIMITED TO, UTILITIES, PIPELINES AND SEWERS. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL AGENCIES AND/OR OWNERS TO VERIFY THIS INFORMATION PRIOR TO AND DURING CONSTRUCTION OF IMPROVEMENTS SHOWN HEREON, AND TO CONTACT THE ENGINEER IN THE EVENT OF ANY SIGNIFICANT DISCREPANCY.
- THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION OF, AND PROTECTING ALL EXISTING UTILITIES AND REPAIRING DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (1-800-227-2600) TWO WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION.

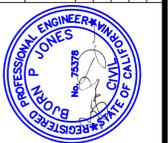
**RECORD DRAWINGS NOTE:**

ALL INFORMATION SHOWN ON THESE PLANS HAS BEEN PREPARED BY, OR UNDER THE DIRECTION OF, THE UNDERSIGNED ENGINEER. ADJUSTMENTS MADE IN THE FIELD DURING CONSTRUCTION ARE INCLUDED HEREIN AND ARE BASED UPON FIELD OBSERVATIONS MADE UNDER THE DIRECTION OF OR BY THE UNDERSIGNED AND/OR INFORMATION RECEIVED FROM THE CITY CONSTRUCTION INSPECTOR, PROJECT CONTRACTORS AND OTHER SOURCES WHEN THE ENGINEER IS ADVISED IN WRITING OF SUCH ADJUSTMENTS. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, CHANGES TO THESE PLANS NOT AUTHORIZED BY THE ENGINEER. ADJUSTMENTS MADE IN THE FIELD WERE NOT SURVEYED AND THE ACCURACY OF THESE DRAWINGS WITH RESPECT TO THOSE ADJUSTMENTS IS NOT GUARANTEED BY THE ENGINEER OR THE CITY OF GRASS VALLEY; FIELD VERIFICATION OF ALL IMPROVEMENTS IS RECOMMENDED.

|                         |  |
|-------------------------|--|
| DATE                    | ENGINEER SIGNATURE<br>(STAMP OR SEAL)  |
|                         |  |
| DEPUTY CITY CLERK       | "APPROVED BY THE CITY COUNCIL<br>OF THE CITY OF GRASS VALLEY THE<br>27TH DAY OF APRIL 2021." |
|                         | 75378<br>R.C.E.  |
| ASSISTANT CITY ENGINEER | 4/27/21<br>DATE  |

NOTE:  
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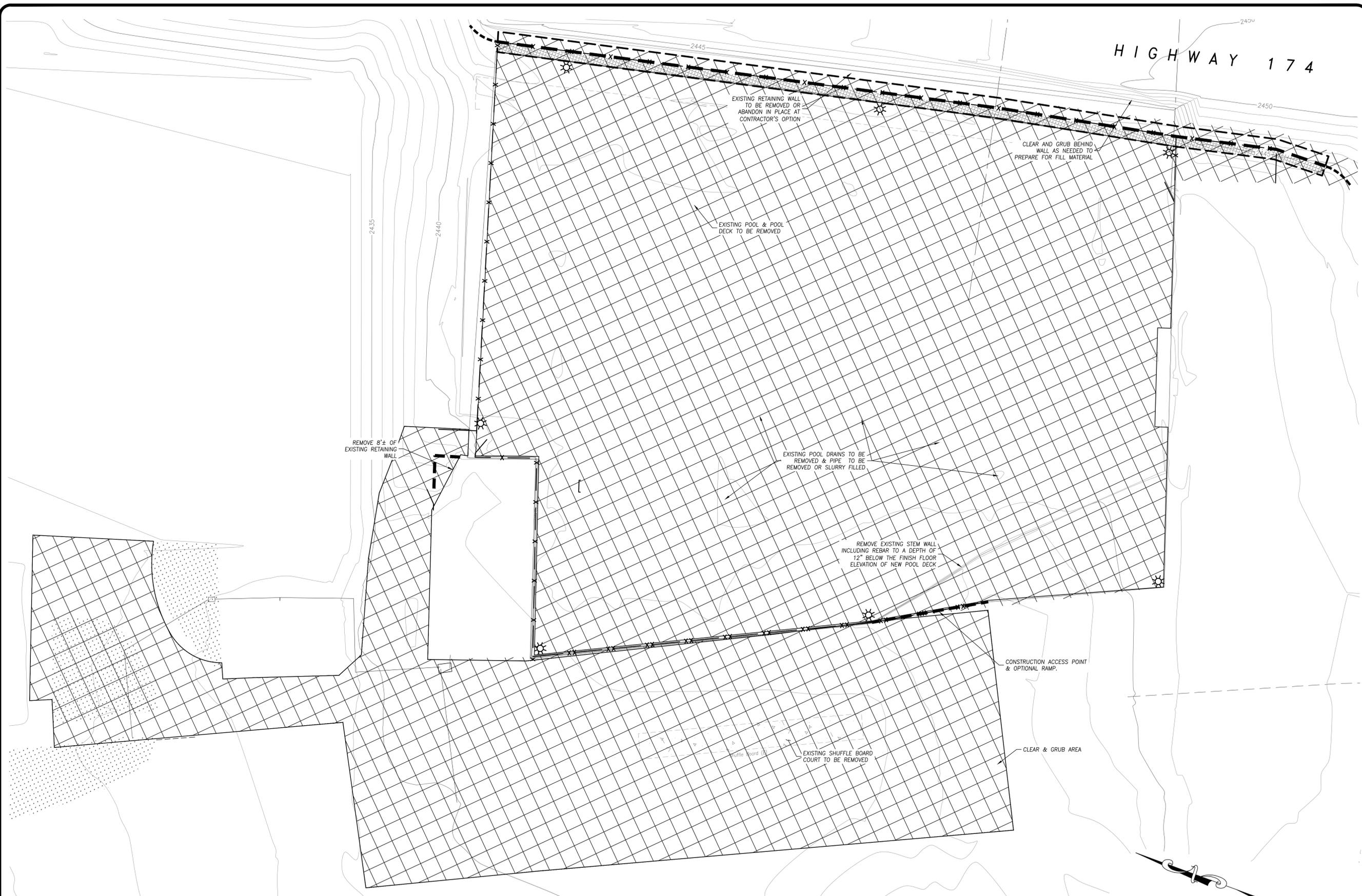


PROJECT NUMBER:  
**20-05**

CITY OF GRASS VALLEY ENGINEERING DIVISION  
**CDBG MEMORIAL PARK FACILITIES IMPROVEMENT PROJECT**  
TITLE SHEET



|                 |          |
|-----------------|----------|
| DRAWN BY:       | DATE:    |
| SEH             | JAN 2021 |
| CHECKED BY:     | DATE:    |
| BPJ             | APR 2021 |
| DRAWING NUMBER: |          |
| <b>2165</b>     |          |
| SHEET NUMBER:   |          |
| <b>1 of 17</b>  |          |



**DEMOLITION NOTES**

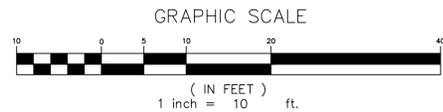
1. THE CONTRACTOR SHALL OBTAIN A BUILDING PERMIT FROM THE CITY OF GRASS VALLEY BUILDING DIVISION PRIOR TO STARTING WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL OF THE REQUIREMENTS OF THE BUILDING PERMIT, AND TO FINAL THE PERMIT.
2. THE LIMITS OF PAVEMENT, SIDEWALK, CURB AND GUTTER REMOVAL SHALL BE APPROVED IN THE FIELD PRIOR TO DEMOLITION. SIDEWALK, CURB AND GUTTER SHALL BE REMOVED FROM JOINT-TO-JOINT.
3. CONTRACTOR SHALL COORDINATE THE ABANDONMENT OF THE OVERHEAD UTILITY DROPS WITH THE

4. CONTRACTOR SHALL INSTALL TEMPORARY 6' TALL CHAIN LINK FENCING TO SECURE THE SITE DURING CONSTRUCTION.
5. WATER, SEWER, AND GAS LINES THAT SERVED THE BUILDINGS TO BE REMOVED SHALL BE CAPPED 1 FOOT AWAY FROM THE EXISTING IMPROVEMENTS TO REMAIN.

RESPECTIVE UTILITY COMPANIES.

**LEGEND**

- MISCELLANEOUS REMOVAL, CLEARING & GRUBBING
- MISCELLANEOUS REMOVAL



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PROJECT NUMBER:  
**20-05**

CITY OF GRASS VALLEY ENGINEERING DIVISION  
**CDBG MEMORIAL PARK FACILITIES  
IMPROVEMENT PROJECT  
POOL DEMOLITION PLAN**



DRAWN BY: **RJL** DATE: **FEB 2021**  
CHECKED BY: **BPJ** DATE: **APR 2021**

DRAWING NUMBER:  
**2165**

SHEET NUMBER:  
**2 of 17**



POUR RETAINING WALL FOOTING AGAINST (E) WALL, UNDISTURBED EARTH OR FORM BOARDS AT CONTRACTOR'S DISCRETION

HIGHWAY 174

RACE STREET

FILL THE AREA BETWEEN THE STEM WALL, PCC FLATWORK & CALTRANS TYPE 6A RETAINING WALL WITH CLASS 2 AB, AND CLEAN NATIVE SOIL MATERIAL FROM THE SITE, AS AVAILABLE. FINAL GRADE SHALL BE A MAXIMUM OF 6" BELOW THE ADJACENT AREAS AT A MAXIMUM SLOPE OF 2%.

CONSTRUCT 30 L.F.± OF NEW WALL TO MATCH NEW WALL. INSTALL 6" TALL CHAINLINK FENCE WITH PRIVACY SLATS (THE TOP OF THE FENCE POST FOOTINGS SHALL BE LEVEL WITH THE TOP OF THE RETAINING WALL)

NATIONAL TANK OUTLET 159"x99"x51" 2,500 GAL SURGE CHAMBER OR EQUAL FOR SWIMMING POOL

NATIONAL TANK OUTLET 127"x60"x51" 1,175 GAL SURGE CHAMBER OR EQUAL FOR ACTIVITY POOL

TIE INTO EXISTING STORM DRAIN SYSTEM

INSTALL BARRIER CURB

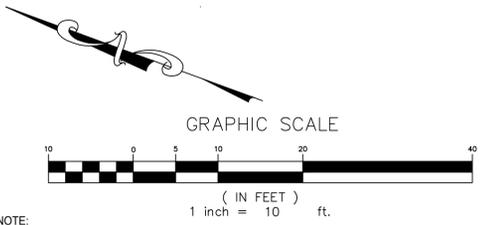
NO PARKING

NO PARKING

COMPACT COMPACT COMPACT COMPACT COMPACT COMPACT

LEGEND

- INSTALL 6" PCC SIDEWALK/FLATWORK
- EXISTING STAMPED PCC (SLATE PATTERN)
- INSTALL 3" HMA ON 8" CL 2 AB
- INSTALL 6" CL 2 AB / SHOULDER BACKING
- BARE SUBGRADE
- INSTALL CALTRANS RETAINING WALL TYPE 6A (CASE 1)
- INSTALL KEYSTONE COMPACT STRUCTURAL RETAINING WALL
- INSTALL 6" TALL CHAIN LINK FENCE WITH PRIVACY SLATS

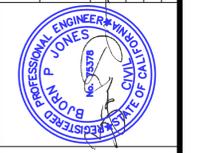


CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL POTHOLE AND VERIFY THE LOCATION OF ALL EXISTING UTILITIES THAT MAY PROPOSE A CONFLICT. VERIFICATION OF THE UTILITY LOCATIONS SHALL BE PROVIDED TO THE ENGINEER, PRIOR TO STARTING WORK.
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3. THE LAYOUT FOR THE NEW IMPROVEMENTS SHALL BE APPROVED IN THE FIELD BY THE ENGINEER PRIOR TO INSTALLATION.
4. THE NEW SIDEWALK, CURB AND GUTTER SHALL MATCH THE GRADE OF THE EXISTING SIDEWALK AT THE CONNECTION POINTS.
5. THE NEW CURB AND GUTTER SHALL MATCH THE GRADE OF THE EXISTING EDGE OF PAVEMENT.
6. ALL UTILITIES LIDS & BOXES TO BE ADJUSTED TO GRADE IN PROPOSED CONSTRUCTION AREA.

NOTE:  
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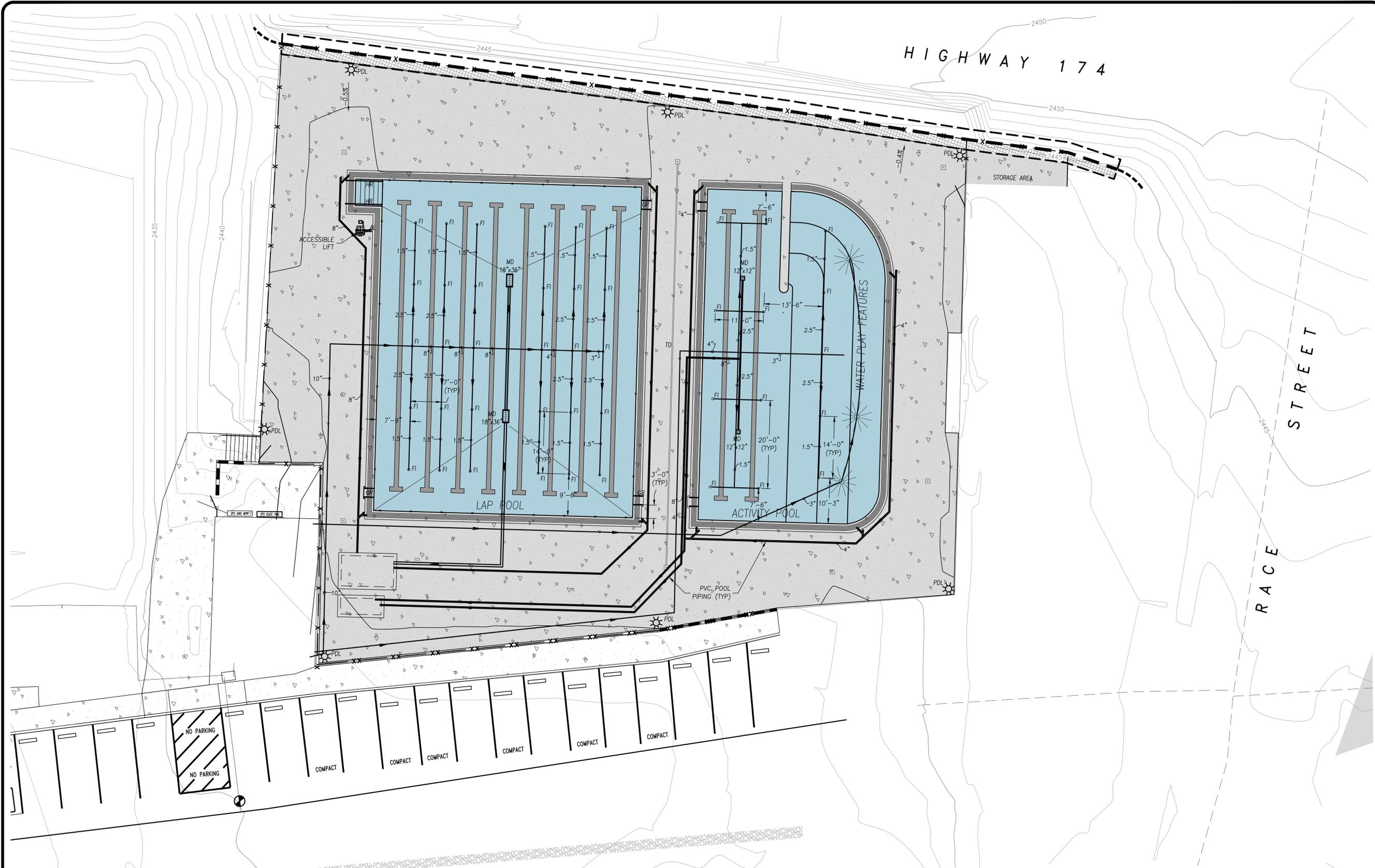
CITY OF GRASS VALLEY ENGINEERING DIVISION  
**CDBG MEMORIAL PARK FACILITIES IMPROVEMENT PROJECT**  
**POOL CONSTRUCTION PLAN**



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**3 of 17**



**CONSTRUCTION NOTES**

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6. ALL UTILITIES LIDS & BOXES TO BE ADJUSTED TO GRADE IN PROPOSED CONSTRUCTION AREA.

**LEGEND**

- MD = MAIN DRAIN
- FI = FLOOR INLET
- GR = GRABRAIL
- HR = HANDRAIL
- AL = ACCESSIBLE LIFT
- DM = DEPTH MARKER
- PDL = POOL-DECK LIGHTING  
LED AREA LIGHT ON 4" ROUND, 16" TALL STEEL POLE W/ CONCRETE FOOTING  
TRENCH DRAIN (T.D.S.) U100KX OR EQUAL



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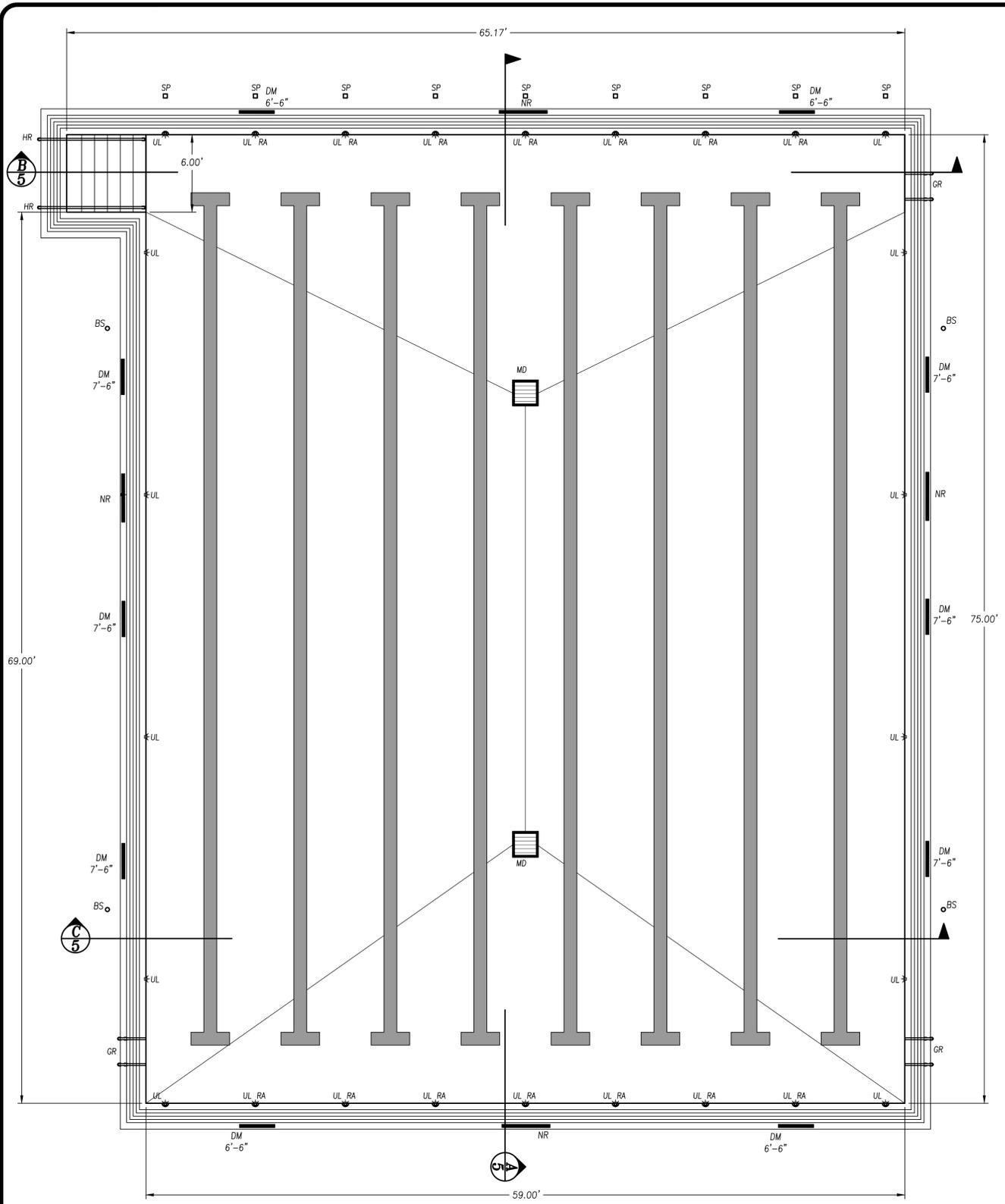
CITY OF GRASS VALLEY ENGINEERING DIVISION  
**CDBG MEMORIAL PARK FACILITIES  
IMPROVEMENT PROJECT**  
POOL UTILITY PLAN



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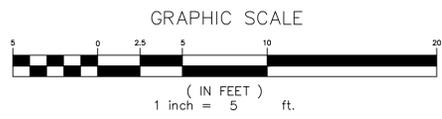
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**4 of 17**



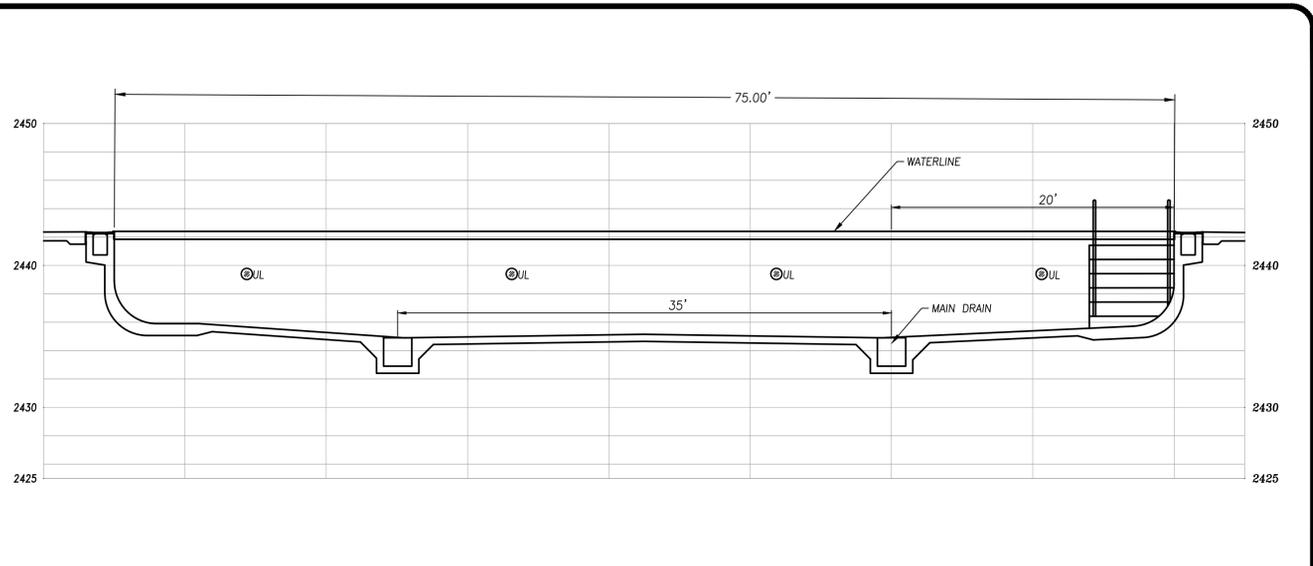
- LEGEND**
- MD = MAIN DRAIN
  - RA = ROPE ANCHOR
  - NR = 'NO RUNNING' MARKER
  - ND = 'NO DIVING' MARKER
  - DM = DEPTH MARKER
  - RLL = RACING LANE LINE
  - SP = START PLATFORM  
PENTAIR PARAGON LONG REACH STANDARD COMPETITOR  
STARTING PLATFORM OR EQUAL
  - UL = UNDER WATER LIGHT  
J&J LPL-F5W-120-100-P OR EQUAL
  - BS = BACKSTROKE STANCHION

**SWIMMING POOL DATA**

- SURFACE AREA = 4,462.00 S.F.
- PERIMETER = 268 F.T.
- DEPTH = 6'-6" TO 7'-6"
- VOLUME = 231,300.00 GALLONS

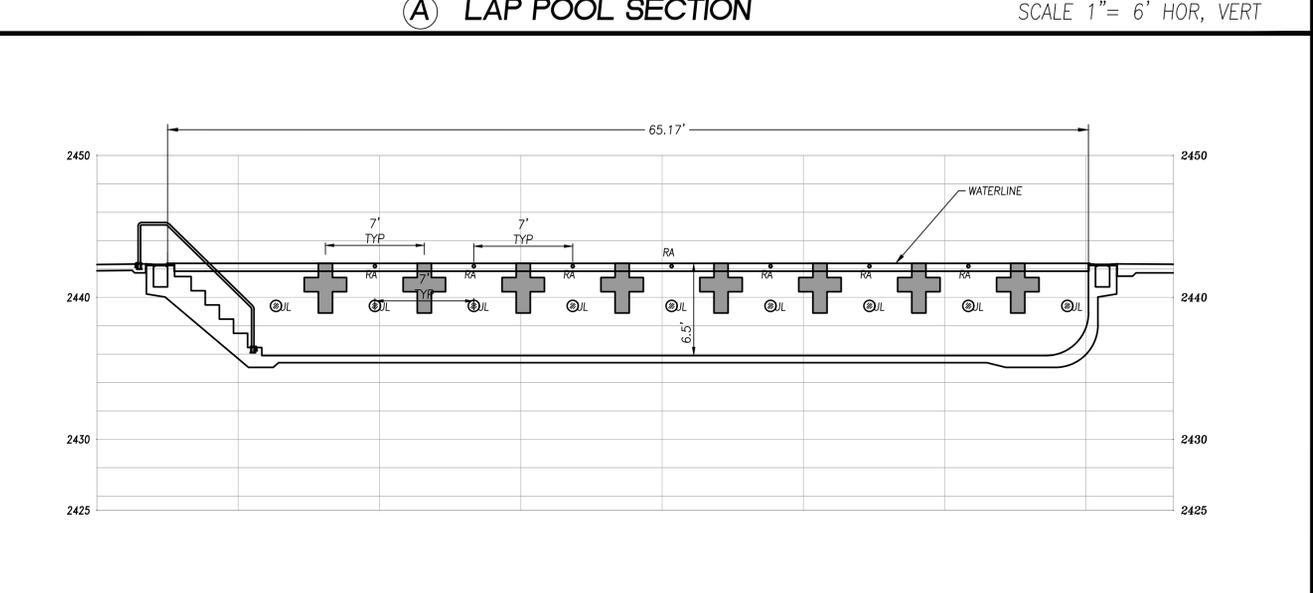


**LAP POOL DETAIL**



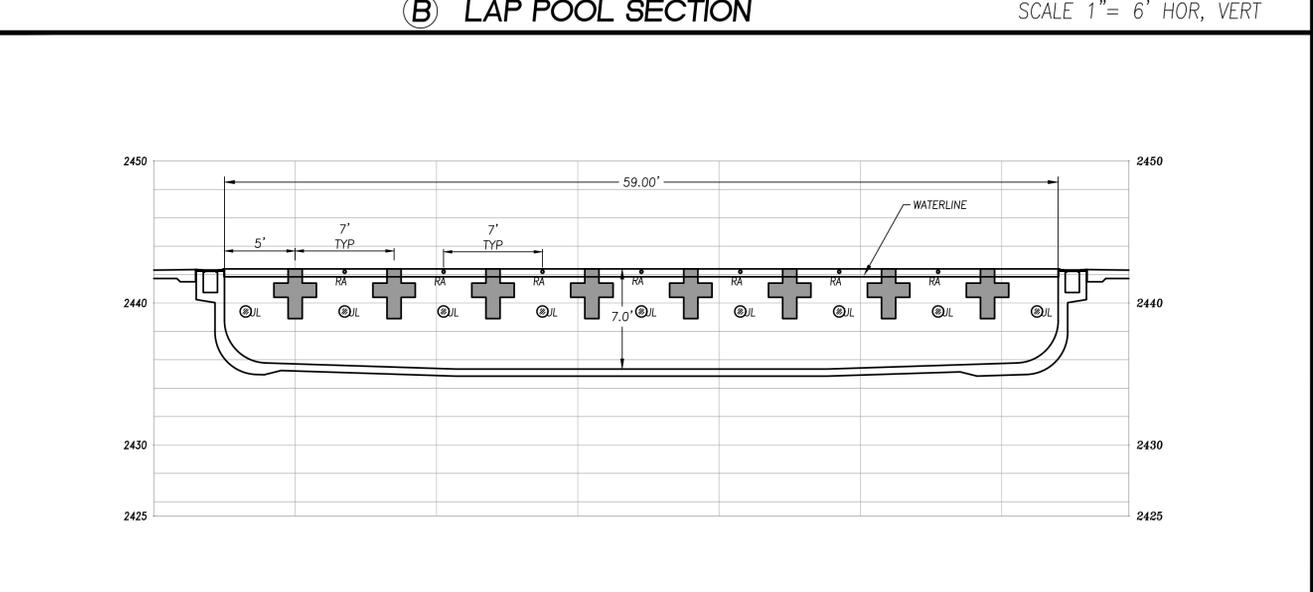
**A LAP POOL SECTION**

SCALE 1" = 6' HOR, VERT



**B LAP POOL SECTION**

SCALE 1" = 6' HOR, VERT



**C LAP POOL SECTION**

SCALE 1" = 6' HOR, VERT

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PROJECT NUMBER:  
**20-05**

**CITY OF GRASS VALLEY ENGINEERING DIVISION**

**CDBG MEMORIAL PARK FACILITIES  
IMPROVEMENT PROJECT**

**LAP POOL DETAILS AND SECTIONS**



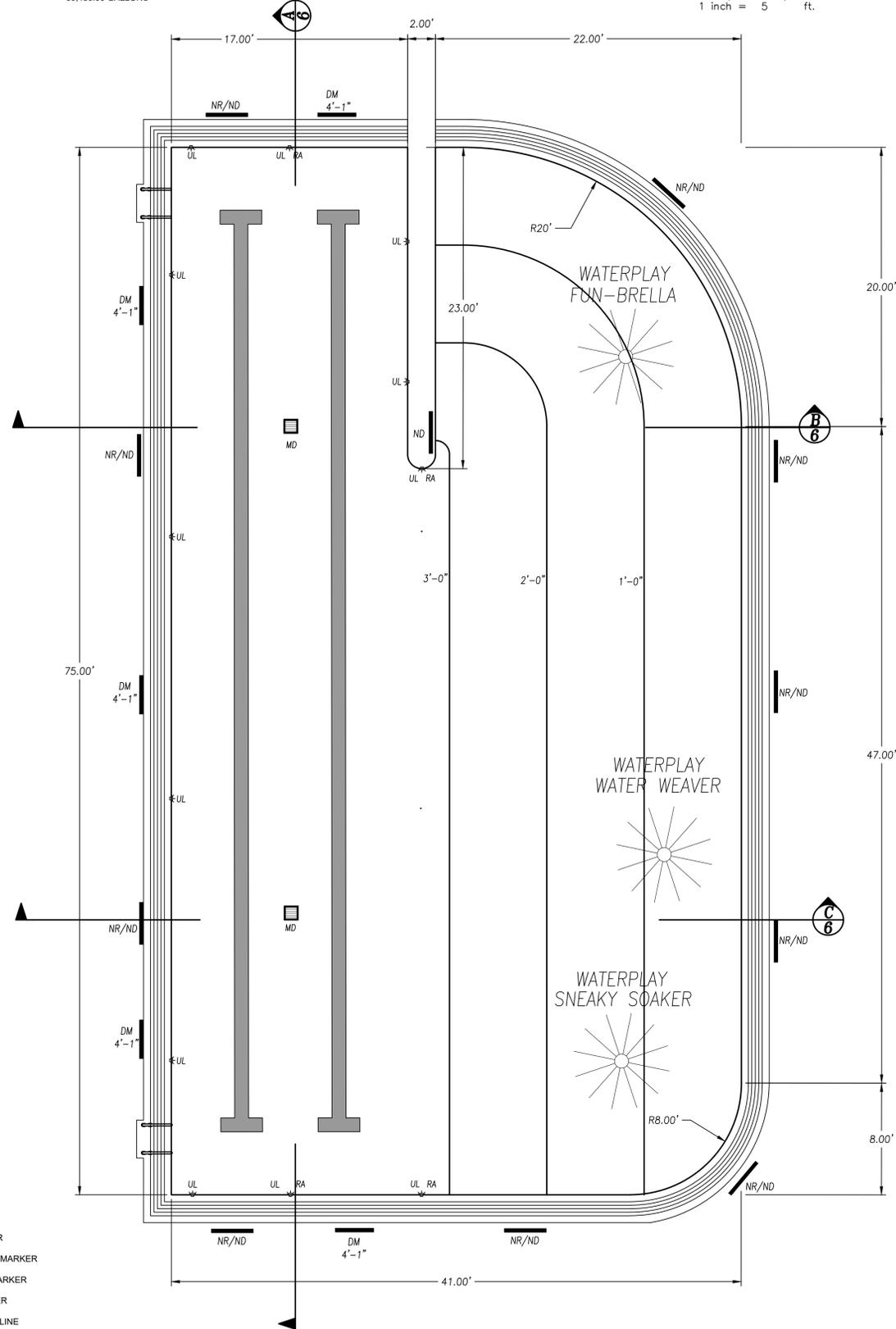
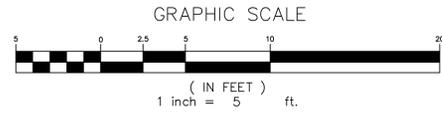
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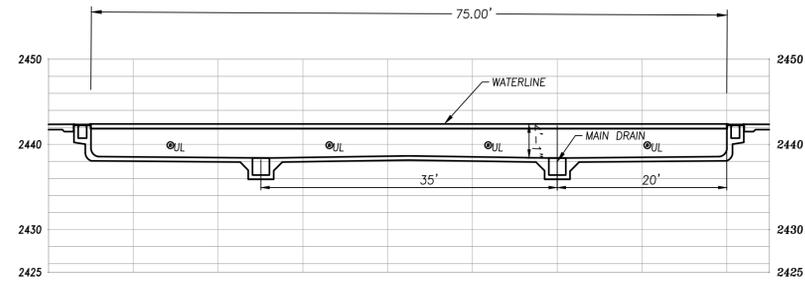
SHEET NUMBER:  
**5 of 17**

**ACTIVITY POOL DATA**  
 SURFACE AREA = 2,930.00 S.F.  
 PERIMETER = 265 F.T.  
 DEPTH = 0'-0" TO 4'-1"  
 VOLUME = 60,480.00 GALLONS



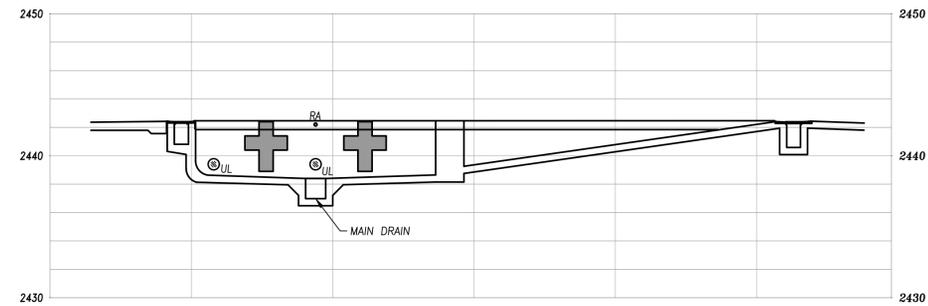
**ACTIVITY POOL DETAIL**

- LEGEND**
- MD = MAIN DRAIN
  - RA = ROPE ANCHOR
  - NR = 'NO RUNNING' MARKER
  - ND = 'NO DIVING' MARKER
  - DM = DEPTH MARKER
  - RLL = RACING LANE LINE
  - UL = UNDERWATER LIGHT  
J&J LPL-F5W-120-100-P OR EQUAL



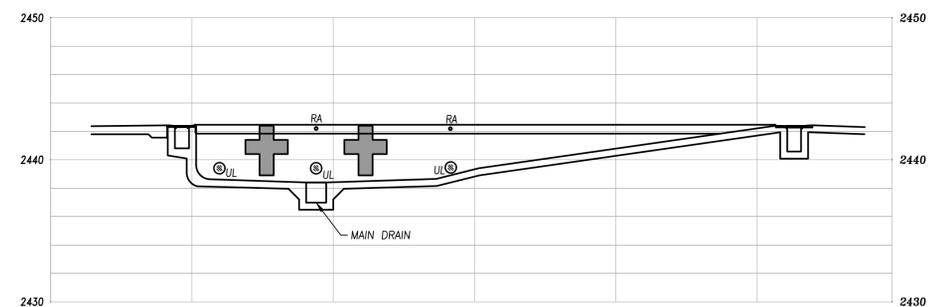
**A ACTIVITY POOL SECTION**

SCALE 1" = 10' HOR, VERT



**B ACTIVITY POOL SECTION**

SCALE 1" = 6' HOR, VERT



**C ACTIVITY POOL SECTION**

SCALE 1" = 6' HOR, VERT

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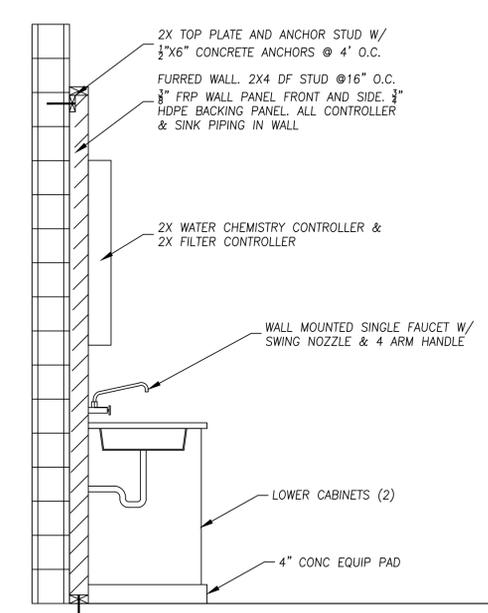
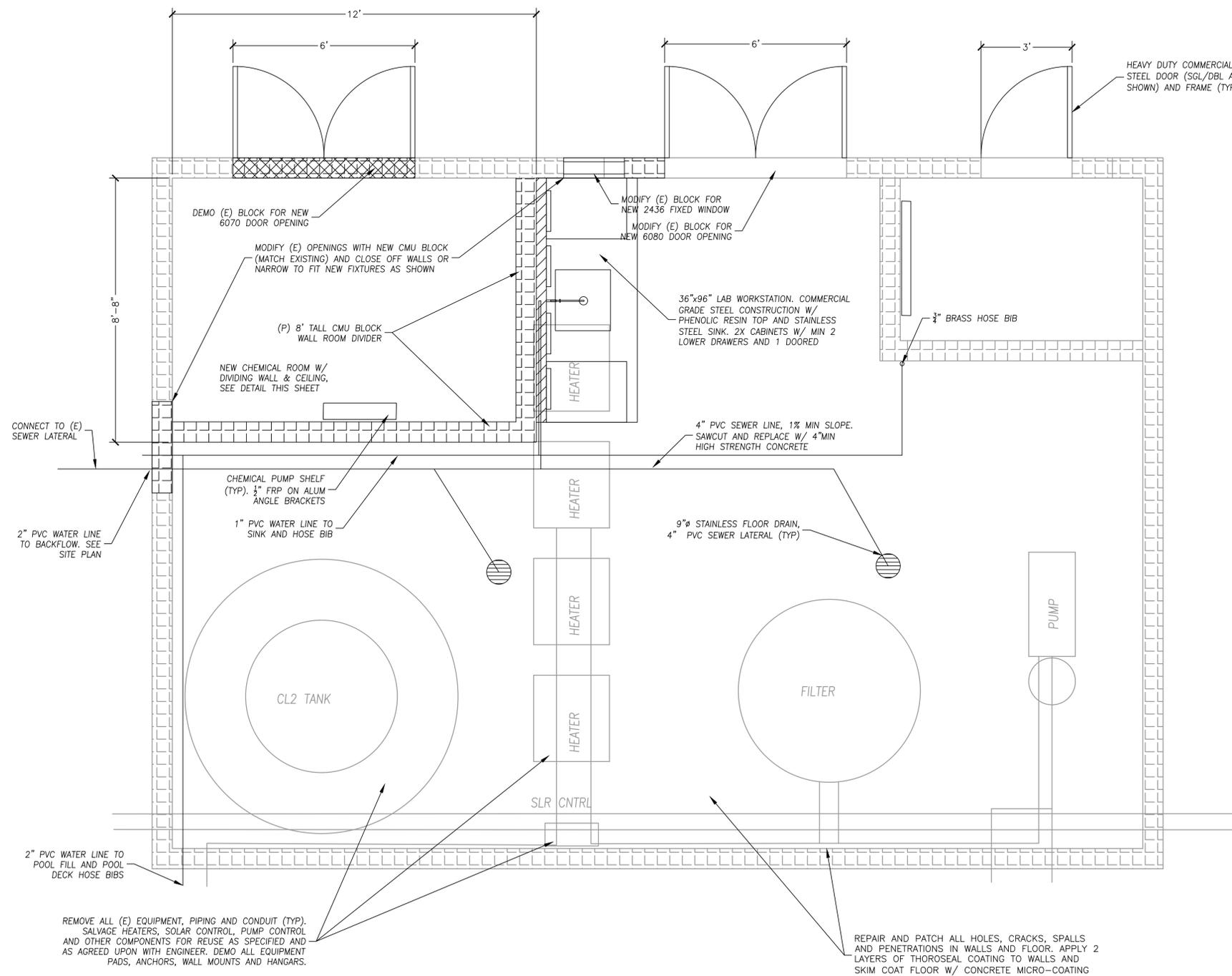


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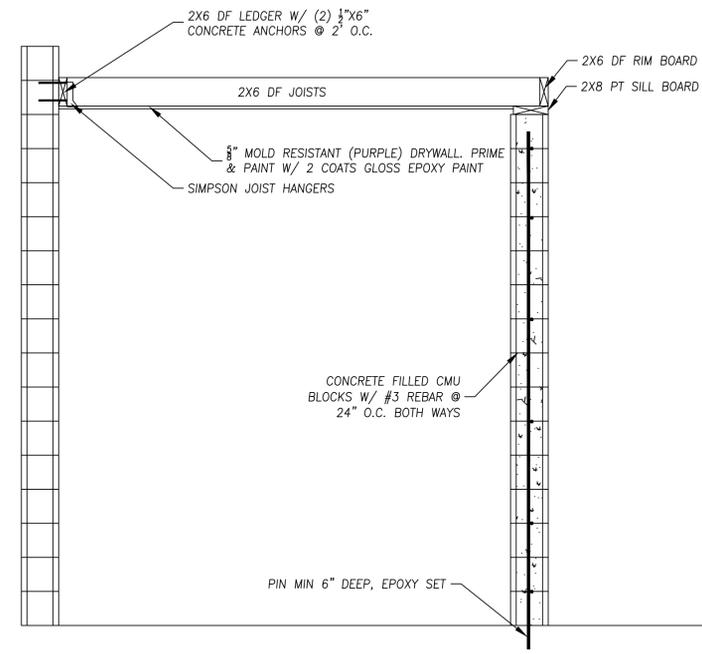
CITY OF GRASS VALLEY ENGINEERING DIVISION  
**CDBG MEMORIAL PARK FACILITIES  
 IMPROVEMENT PROJECT**  
**ACTIVITY POOL DETAILS AND SECTIONS**



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 CHECKED BY: **BPJ** DATE: **APR 2021**  
 DRAWING NUMBER:  
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 SHEET NUMBER:  
**6 of 17**



**(A) WORKSTATION DETAIL**



**(B) CHEMICAL ROOM DETAIL**

- NOTES**
- CONTRACTOR TO EVALUATE AND PROPOSE WHICH EQUIPMENT, FIXTURES, BRACKETS, PIPES AND APPURTENANCES ARE SUITABLE FOR SALVAGE AND REUSE, WITH APPROVAL OF THE ENGINEER.
  - CONTRACTOR TO DESIGN AND CONSTRUCT STRUCTURAL IMPROVEMENTS TO FIT PROPOSED DOORS, EQUIPMENT, FIXTURES AND COMPONENTS.
  - CONTRACTOR TO COORDINATE ALL FINAL EQUIPMENT AND FIXTURE SELECTION, SIZING, ORDERING, SEQUENCE OF CONSTRUCTION, ASSEMBLY AND INSTALLATION.
  - ALL COMPONENTS, FIXTURES, INSTALLATION METHODS AND FUNCTIONALITY SHALL BE "COMMERCIAL GRADE" USING INDUSTRY ACCEPTED STANDARDS FOR THE UTMOST QUALITY AND DURABILITY.

- NEW CMU BLOCK WALLS SHALL BE DESIGNED AND CONSTRUCTED TO MATCH EXISTING WALLS. BLOCKS SHALL BE TERMINATED TO NEAT CLEAN LINES, GROUTED AND FINISHED TO MATCH AS NEARLY AS POSSIBLE TO EXISTING SURFACING.
- NEW BLOCK WALLS SHALL BE PINNED ON ABUTTING FACES TO EXISTING WALLS WITH EPOXY SET REBAR DOWELS.
- EXISTING ROOF AND WALL PENETRATIONS MAY BE REUSED AS SUITABLE. ALL FLASHING AND SEALS TO BE REPLACED
- ALL SPACES SHALL BE ADEQUATELY VENTED TO THE EXTERIOR WITH STATIC OR FORCED AIR VENTS/FANS AS APPROPRIATE
- PROVIDE 36W LED 2X2 FLAT PANEL IN ALL ROOMS AND AT REGULAR INTERVALS
- PROVIDE GFCI RECEPTACLES IN ALL ROOMS AND MULTIPLE IN VICINITY OF WORK STATION

**MECHANICAL ROOM DEMOLITION AND STRUCTURAL**

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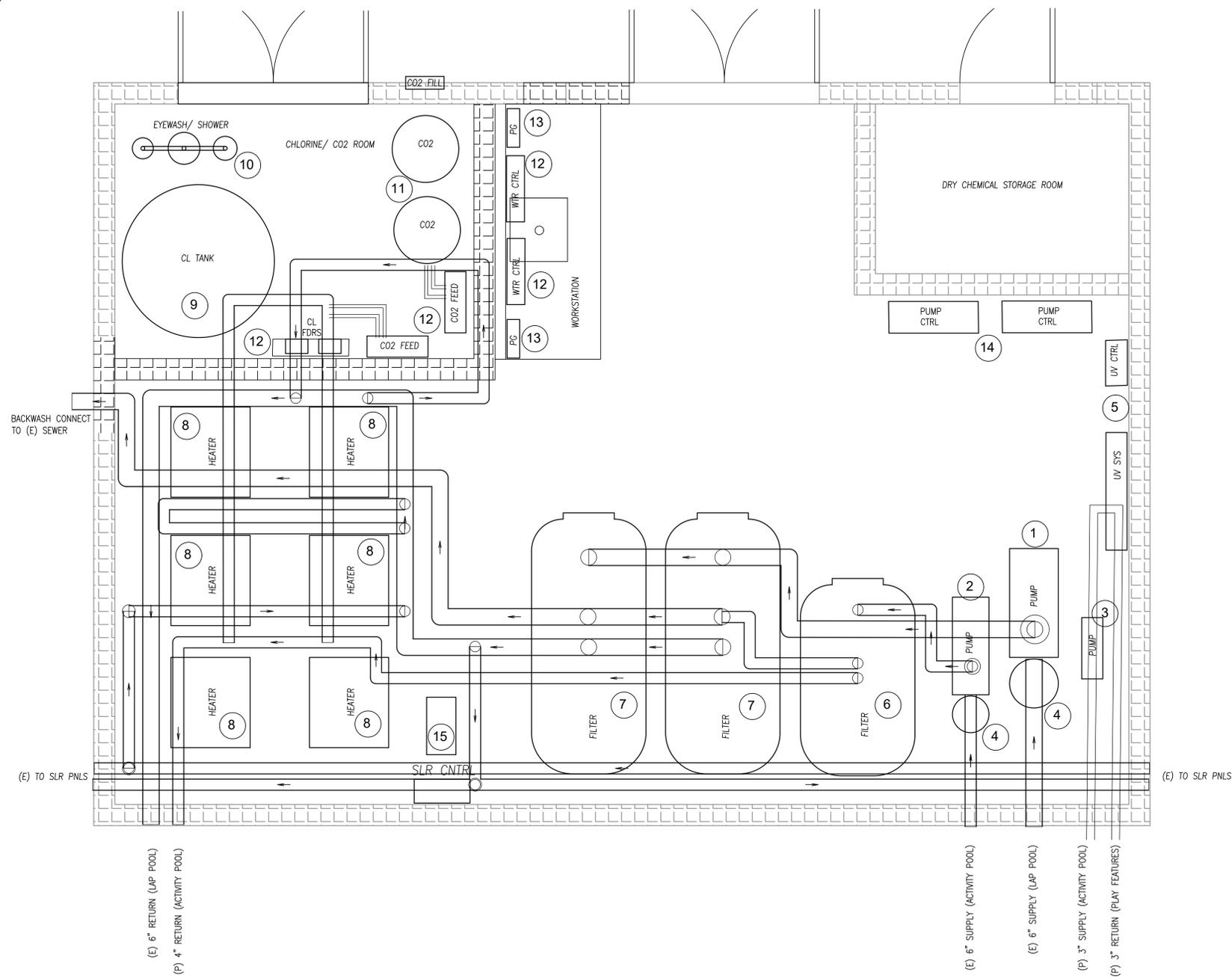
**CITY OF GRASS VALLEY ENGINEERING DIVISION**  
**CDBG MEMORIAL PARK FACILITIES IMPROVEMENT PROJECT**  
**MECHANICAL BUILDING DEMO + STRUCTURAL**



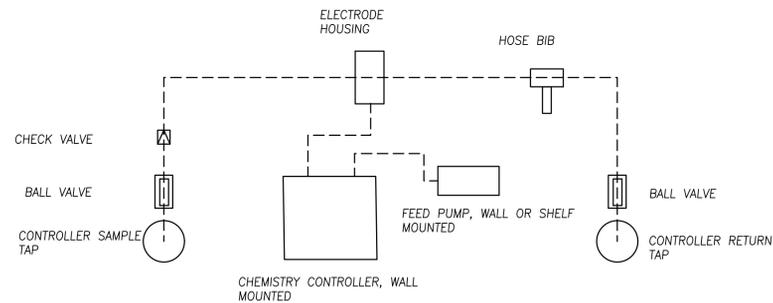
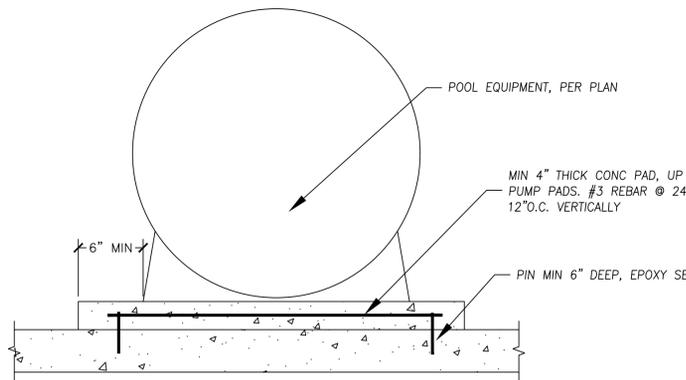
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**MECHANICAL ROOM EQUIPMENT AND PIPING**



**NOTES**

- MECHANICAL LAYOUT AND PLANS ARE TO BE INTERPRETED TO A DEGREE AS SCHEMATIC IN NATURE AND NOT READY FOR CONSTRUCTION. IT IS EXPECTED THAT THE CONTRACTOR EMPLOYS THE SERVICES OF A PROFESSIONAL POOL DESIGNER TO CALCULATE, CONFIRM, PROPOSE AND OTHERWISE FULLY SPECIFY THE EQUIPMENT LAYOUT, FUNCTIONALITY, INTERCONNECTION AND INSTALLATION METHODS
- ALL EQUIPMENT TO BE ELEVATED ON CONCRETE EQUIPMENT PADS PER DETAIL OR WALL MOUNTED AS APPROPRIATE
- ALL EQUIPMENT TO BE SECURELY ANCHORED WITH EXPANSION OR WEDGE ANCHORS INTO CONCRETE ABLE TO WITHSTAND 3000LBS TENSION LOAD
- ALL PIPING, CONDUIT, COMPONENTS, FIXTURES AND ACCESSORIES SHALL BE SECURELY MOUNTED TO UNISTRUT METAL FRAMING SYSTEM OR AS APPROVED. PIPING TO BE SUPPORTED AT REGULAR INTERVALS WITH PIPE HANGERS OR FLOOR MOUNTS
- THE PIPING SYSTEM SHALL BE LABELED AT REGULAR INTERVALS WITH THE DIRECTION OF FLOW. A FLOW DIAGRAM AND OPERATING SCHEMATICS OF THE SYSTEM SHALL BE PROVIDED AND AVAILABLE ON SITE
- NOT SHOWN BUT TO BE PROVIDED ARE ALL REQUIRED BALL VALVES, BUTTERFLY VALVES AND CHECK VALVES NECESSARY TO CONTROL FLOW AND ISOLATE EQUIPMENT DURING REGULAR, UNEXPECTED AND MAINTENANCE OPERATIONS
- NOT SHOWN BUT TO BE PROVIDED ARE ALL REQUIRED FLOW METERS AND PRESSURE GAGES NECESSARY TO MONITOR OPERATIONS AND PROVIDE FEEDBACK TO CONTROL EQUIPMENT AND OPERATOR
- GAS PRESSURE REGULATOR SHALL BE INSTALLED AS REQUIRED
- HAZARDOUS INFORMATION MATERIAL PLACARDS SHALL BE PROVIDED AS REQUIRED
- THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ELECTRICAL LOAD REQUIREMENTS OF ALL EQUIPMENT AND PERFORMING LOAD CALCULATION NECESSARY FOR PROPER GROUPING/SEPARATING OF DEVICES INTO BALANCED ELECTRICAL CIRCUITS
- AN ELECTRICAL PANEL SCHEDULE SHALL BE PROVIDED FOR APPROVAL PRIOR TO CONSTRUCTION
- AN ELECTRICAL WIRING/INTERCONNECTION DIAGRAM SHALL BE DEVELOPED BY THE CONTRACTOR AND PROVIDED FOR APPROVAL PRIOR TO CONSTRUCTION. A COMPLETE AS-BUILT WIRING DIAGRAM SHALL BE PROVIDED UPON COMPLETION

**EQUIPMENT LIST**

- LAP POOL PUMP. PENTAIR AURORA 3801 4X5X9.5 1800 RPM, OR EQUAL
- ACTIVITY POOL PUMP. PENTAIR AURORA 3801 2.5X3X9.5 1800 RPM, OR EQUAL
- PLAY FEATURE BOOSTER PUMP. PENTAIR WHISPERFLO WFE-3, OR EQUAL
- LAP & ACTIVITY POOL STRAINERS. PENTAIR PS SERIES, PS6X5E & PS4X3E, OR EQUAL
- ULTRA VIOLET DISINFECTION SYSTEM. PENTAIR BIOSHIELD UV SYSTEM OR EQUAL
- ACTIVITY POOL FILTER. PENTAIR STARK SS1-72-06 OR EQUAL
- LAP POOL FILTER. PENTAIR STARK SS2-96-06 OR EQUAL
- HEATER. PENTAIR ETI 400 (SALVAGE 4 EXISTING HEATERS)
- CHLORINE TANK. 500 GALLON POLYETHYLENE, DUAL WALL/CONTAINMENT, ANCHORED
- COMBINATION EYE WASH/ SHOWER STATION. HAWS #8309WC OR EQUAL
- CO2 TANKS. 600LB CRYOGENIC LIQUID STORAGE TANK W/ REMOTE FILL PORT
- CHEMICAL CONTROLLERS/FEED PUMPS. PENTAIR INTELICHEM 522578 OR EQUAL
- FILTER GAGES/BACKWASH CONTROL. PENTAIR CS400 OR EQUAL
- VFD PUMP CONTROLLERS. H20 TECHNOLOGIES SPCS FD (SALVAGE 1 EXISTING)
- SOLAR WATER HEATER CONTROLLER AND BOOSTER PUMP, SALVAGE OR MATCH (E)

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**CITY OF GRASS VALLEY ENGINEERING DIVISION**  
**CDBG MEMORIAL PARK FACILITIES**  
**IMPROVEMENT PROJECT**  
**MECHANICAL BUILDING + EQUIPMENT**



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**DEMOLITION PLAN**

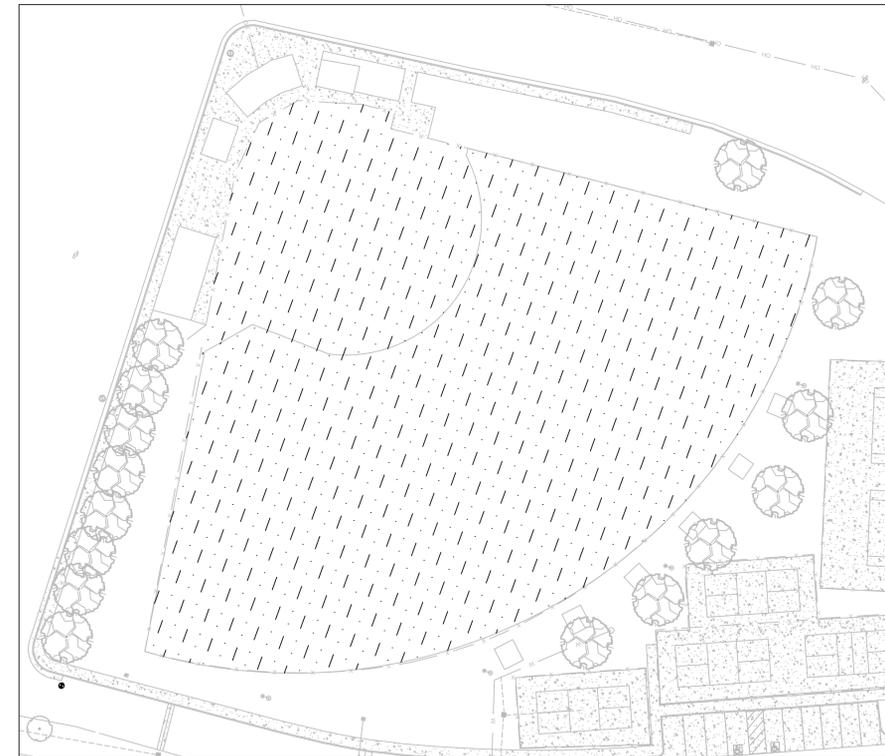
SCALE: 1"=20'

**NOTES**

1. ALL DISTURBED SURFACES TO REMAIN EXPOSED SHALL BE COVERED WITH MIN 2" WOOD CHIPS/MULCH OR AS APPROVED BY THE ENGINEER.
2. EXISTING TREES SHOWN TO REMAIN SHALL BE PRESERVED AND PROTECTED FROM DAMAGE. TREE PROTECTION FENCING SHALL BE INSTALLED ON THE CONSTRUCTION SIDE OF TREES IN PROXIMITY TO THE WORK AS REQUIRED AND AS SHOWN IN CITY STD GR-5
3. THE CONTRACTOR SHALL COMPLETELY REMOVE EXISTING TRAFFIC STRIPES AND PAVEMENT MARKINGS PRIOR TO RESTRIPING

**LEGEND**

- DEMOLISH AND REMOVE CONCRETE AND OR BUILDING FACILITIES
- CLEARING, GRUBBING, AND DEMOLITION OF SOD, VEGETATION AND MISC. IMPROVEMENTS
- REMOVE (E) TREE, GRIND OR EXCAVATE STUMP



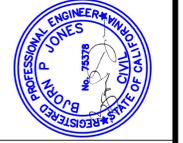
**DEMOLITION PLAN SOFTBALL FIELD**

SCALE: 1"=40'

**NOTE:**

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**CITY OF GRASS VALLEY ENGINEERING DIVISION**  
**CDBG MEMORIAL PARK FACILITIES**  
**IMPROVEMENT PROJECT**  
**PARK DEMOLITION PLAN**



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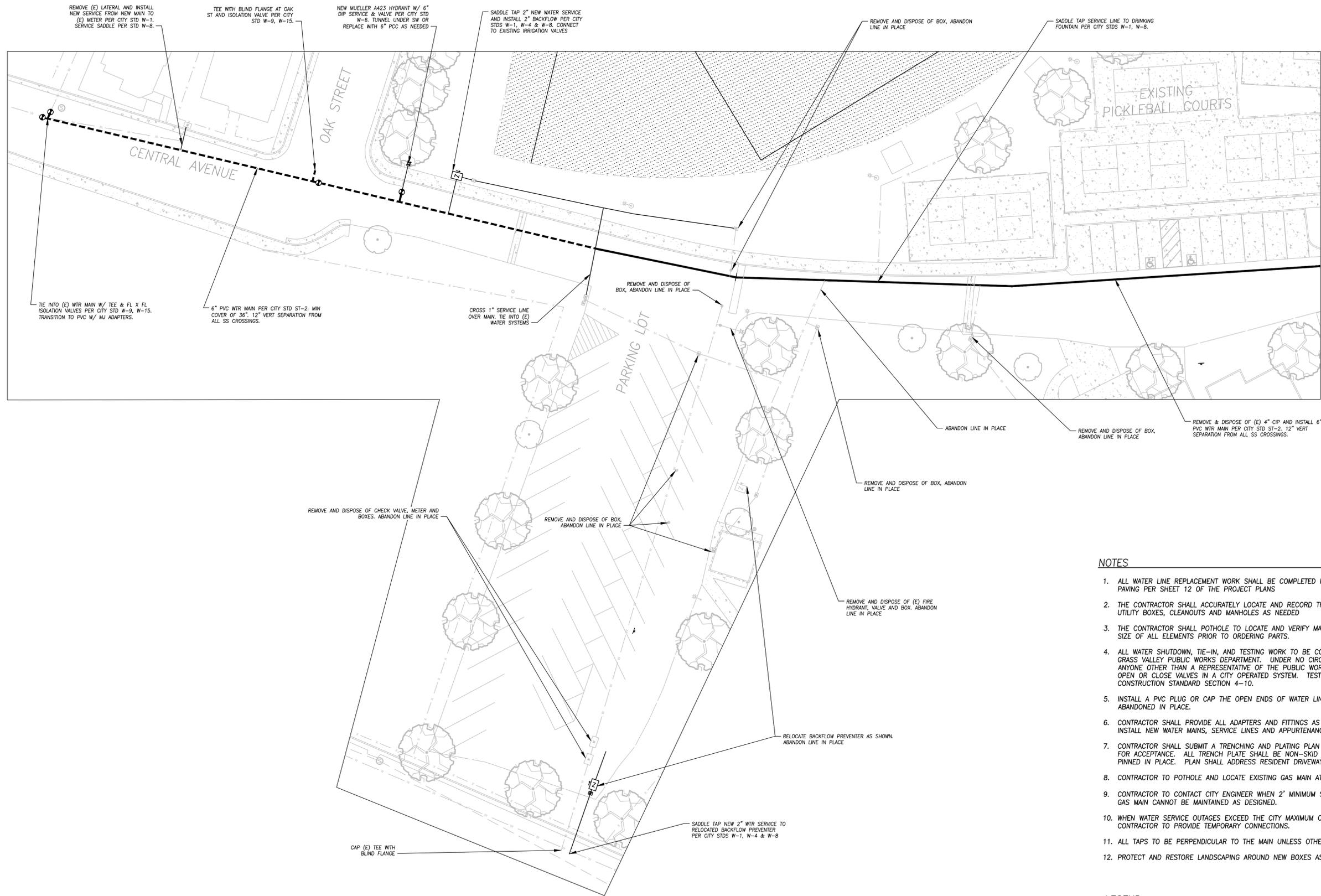
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**WATER LINE REPLACEMENT**

SCALE: 1"=20'

**NOTES**

1. ALL WATER LINE REPLACEMENT WORK SHALL BE COMPLETED PRIOR TO ASPHALT PAVING PER SHEET 12 OF THE PROJECT PLANS
2. THE CONTRACTOR SHALL ACCURATELY LOCATE AND RECORD THE LOCATIONS OF ALL UTILITY BOXES, CLEANOUTS AND MANHOLES AS NEEDED
3. THE CONTRACTOR SHALL POTHOLE TO LOCATE AND VERIFY MATERIAL TYPE AND SIZE OF ALL ELEMENTS PRIOR TO ORDERING PARTS.
4. ALL WATER SHUTDOWN, TIE-IN, AND TESTING WORK TO BE COORDINATED WITH GRASS VALLEY PUBLIC WORKS DEPARTMENT. UNDER NO CIRCUMSTANCES SHALL ANYONE OTHER THAN A REPRESENTATIVE OF THE PUBLIC WORKS DEPARTMENT OPEN OR CLOSE VALVES IN A CITY OPERATED SYSTEM. TESTING PROCEDURES PER CONSTRUCTION STANDARD SECTION 4-10.
5. INSTALL A PVC PLUG OR CAP THE OPEN ENDS OF WATER LINES TO BE ABANDONED IN PLACE.
6. CONTRACTOR SHALL PROVIDE ALL ADAPTERS AND FITTINGS AS NECESSARY TO INSTALL NEW WATER MAINS, SERVICE LINES AND APPURTENANCES.
7. CONTRACTOR SHALL SUBMIT A TRENCHING AND PLATING PLAN TO THE ENGINEER FOR ACCEPTANCE. ALL TRENCH PLATE SHALL BE NON-SKID AND SHALL BE PINNED IN PLACE. PLAN SHALL ADDRESS RESIDENT DRIVEWAY ACCESS.
8. CONTRACTOR TO POTHOLE AND LOCATE EXISTING GAS MAIN AT EACH CROSSING.
9. CONTRACTOR TO CONTACT CITY ENGINEER WHEN 2' MINIMUM SEPARATION FROM GAS MAIN CANNOT BE MAINTAINED AS DESIGNED.
10. WHEN WATER SERVICE OUTAGES EXCEED THE CITY MAXIMUM OF 6 HOURS, CONTRACTOR TO PROVIDE TEMPORARY CONNECTIONS.
11. ALL TAPS TO BE PERPENDICULAR TO THE MAIN UNLESS OTHERWISE APPROVED.
12. PROTECT AND RESTORE LANDSCAPING AROUND NEW BOXES AS NEEDED.

**LEGEND**

- REMOVE AND DISPOSE OF EXISTING 4" CAST IRON PIPE AND INSTALL NEW 6" PVC WATER MAIN PER CITY CONSTRUCTION STANDARDS AND DETAIL ST-2
- - - INSTALL NEW 6" PVC WATER MAIN PER CITY CONSTRUCTION STANDARDS AND DETAIL ST-2

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CITY OF GRASS VALLEY ENGINEERING DIVISION

**CDBG MEMORIAL PARK FACILITIES  
IMPROVEMENT PROJECT  
PARK WATERLINE REPLACEMENT**



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**20-05**

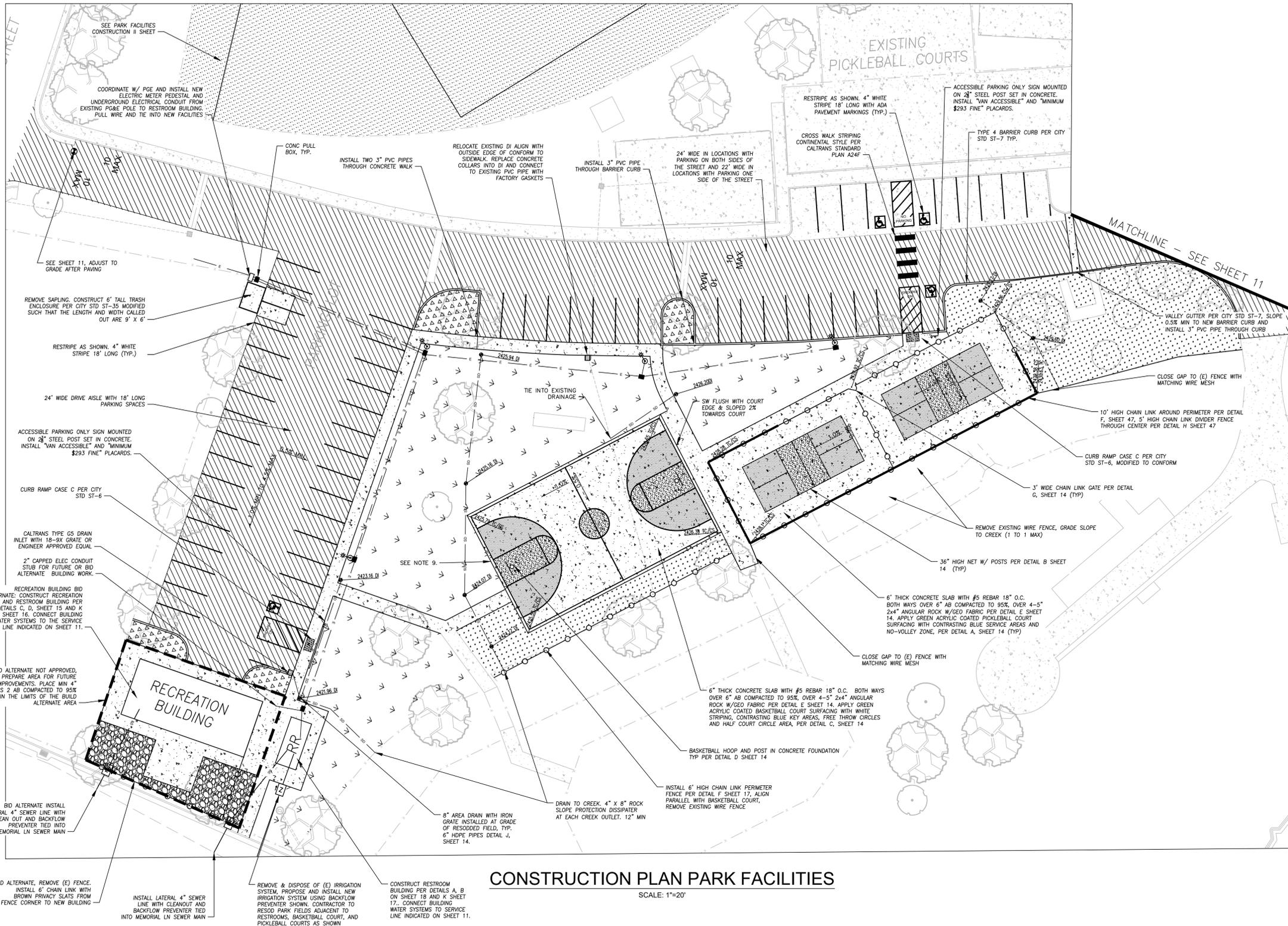
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**CONSTRUCTION PLAN PARK FACILITIES**

SCALE: 1"=20'

**NOTES**

1. SIDEWALK ALIGNMENTS AND CURB RAMP LAYOUTS SHOWN ARE APPROXIMATE AND ALL IMPROVEMENTS ARE TO BE STAKED OR LAID OUT BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER. ADJUSTMENTS MAY BE NECESSARY IN THE FIELD TO MATCH EXISTING CONDITIONS AND MAINTAIN NECESSARY CLEARANCES AND SLOPES.
2. ALL WALK CROSS-SLOPES TO BE 1% MIN, 2% MAX AND DIRECTED AWAY FROM BUILDINGS AND COURT SURFACES WHERE POSSIBLE UNLESS OTHERWISE SPECIFIED ON PLANS OR BY THE ENGINEER. PROFILE GRADES SHALL NOT EXCEED 8.33%. ALL PROFILE GRADES GREATER THAN 5% SHALL HAVE A 5' X 5' LEVEL LANDING AREA APPROACHING AND EXITING THE GRADE.
3. WALK AND COURT AREA SHALL BE BACKED WITH NATIVE FILL OR AGGREGATE AS NEEDED TO MAINTAIN 1" DROP OFF ON ALL SIDES.
4. ALL DISTURBED SURFACES TO REMAIN EXPOSED SHALL BE COVERED WITH MIN 2" MULCH OR AS APPROVED BY THE ENGINEER.
5. EXISTING TREES SHOWN TO REMAIN SHALL BE PRESERVED AND PROTECTED FROM DAMAGE. TREE PROTECTION FENCING SHALL BE INSTALLED ON THE CONSTRUCTION SIDE OF TREES IN PROXIMITY TO THE WORK AS REQUIRED AND AS SHOWN IN CITY STD GR-5.
6. SIDEWALKS SHALL BE CONSTRUCTED SUCH THAT THE DIFFERENCE IN ELEVATION BETWEEN THE SIDEWALK AND FINISH FLOOR OF THE BUILDING OR RESTROOMS IS 1" MAX.
7. TRANSITION FROM CURB RAMP TO GUTTER TO BE FLUSH AND FREE OF ABRUPT CHANGES.
8. NEW SIDEWALK TO MATCH WITH EXISTING AT LIMITS OF CONSTRUCTION. PROVIDE ASPHALT EXPANSION FELT AT JOINTS OF NEW TO EXISTING & DOWEL WITH 12" #4 REBAR SET 6" DEEP.
9. USE NATIVE FILL AT A MAXIMUM SLOPE OF 4 TO 1 TO CONFORM TO EXISTING GRADE WITHIN A MAXIMUM OF 5' FROM EDGES OF GRAVEL BORDERS AND/OR CONCRETE.
10. NEW HMA PAVING SHALL CONFORM TO EXISTING DRIVEWAYS AND LIP OF GUTTER. PAVEMENT SHALL BE SLOPED TO ALLOW DRAINAGE TO FREELY FLOW FROM NEW PAVEMENT SURFACES TO EXISTING GUTTERS.
11. UTILITY COVERS AND MANHOLES WITHIN THE HMA PAVING AREA SHALL BE ADJUSTED TO GRADE.
12. ALL ADA PARKING AISLES SHALL HAVE SLOPES NO MORE THAN 2% MAX IN ANY DIRECTION.

**LEGEND**

- 2" REMOVE AND REPLACE HMA PER DETAIL E SHEET 18
- 6" THICK PCC OVER MIN 6" AB
- 1"x2" CRUSHED AGGREGATE, 4" MIN OVER FABRIC
- RESOD PARK FIELDS
- LANDSCAPE MULCH, SHREDDED CEDAR OR REDWOOD WOOD CHIPS PER CONTRACT SPECIFICATIONS
- PLANT GROUND COVER VEGETATION PER CITY STD LSC-2, SPECIES VINCA MINOR
- RETAINING CURB PER DETAIL I, SHEET 14
- 1" PVC ELECTRICAL CONDUIT TO LIGHT POLES, 3" PVC TO RESTROOM/REC BUILDING
- LED LIGHT POLE ON CONCRETE FOOTING
- 6" DUAL WALL HDPE DRAIN PIPE UNLESS SHOWN OTHERWISE, 1% MIN SLOPE
- 3' X 5' DETECTABLE WARNING SURFACE PER CALTRANS STANDARD PLANS AB8A

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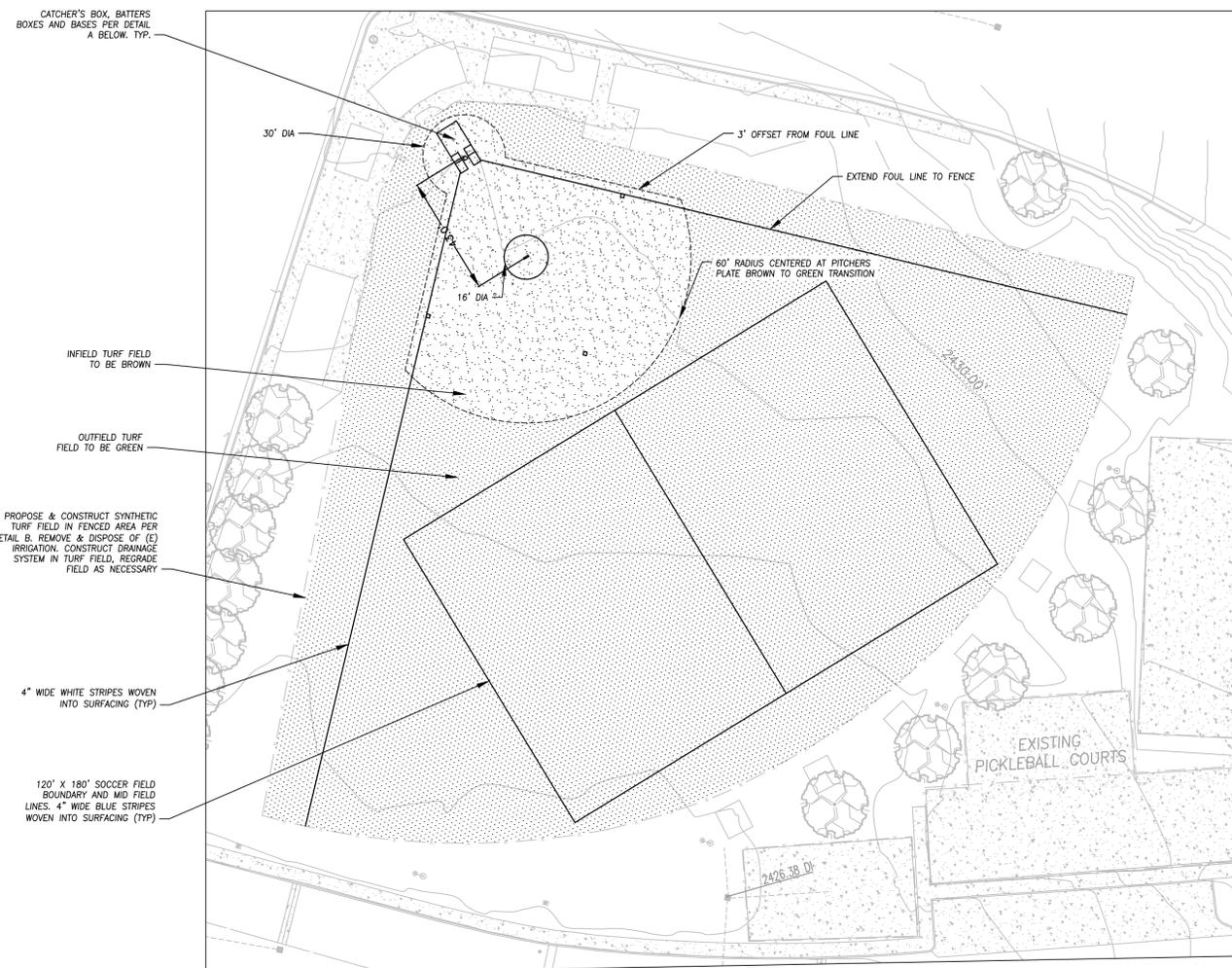
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**IMPROVEMENT PROJECT**  
**PARK FACILITIES CONSTRUCTION I**



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**SOFTBALL FIELD ARTIFICIAL TURF CONSTRUCTION PLAN**

SCALE: 1"=30'

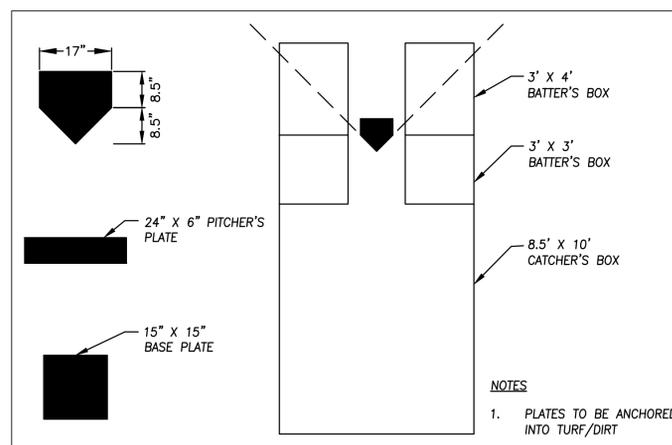


**SOFTBALL FIELD CONSTRUCTION BID ALTERNATE**

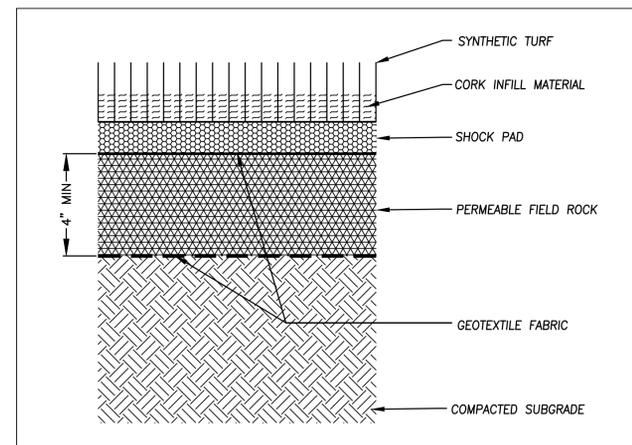
SCALE: 1"=30'

BUILD UP AND REGRADE SOFTBALL FIELD TO IMPROVE DRAINAGE. INSTALL DRAINAGE SYSTEM AND TIE INTO EXISTING DRAINAGE FACILITIES. RESOD SOFTBALL FIELD WITH GRASS TO MATCH EXISTING. INFIELD MATERIAL TO BE A MIX OF 60% SAND, 30% CLAY & 10% SILT

REMOVE AND DISPOSE OF EXISTING IRRIGATION SYSTEM AS NECESSARY. PROPOSE AND INSTALL NEW IRRIGATION SYSTEM TIE INTO EXISTING BACKFLOW PREVENTER.



**A CATCHER'S BOX AND PLATE DETAILS**  
NOT TO SCALE



**B TYPICAL TURF FIELD SECTION**  
NOT TO SCALE

**NOTES**

- ARTIFICIAL TURF FIELD TO BE COMPLETELY DESIGNED BY CONTRACTORS ENGINEER AND SUBMITTED FOR APPROVAL PRIOR TO ORDERING MATERIALS. TURF FIELD DESIGN AND CONSTRUCTION INCLUDES THE TURF FIELD SYSTEM, TURF FIELD SECTION, MATERIALS, DRAINAGE SYSTEM, PERIMETER EDGING, LAYOUT AND SLOPES.
- IRRIGATION OUTSIDE OF AND ADJACENT TO FENCED FIELD TO REMAIN OPERATIONAL
- DRAINAGE PIPES SHALL BE SLOPED AT 1% MIN

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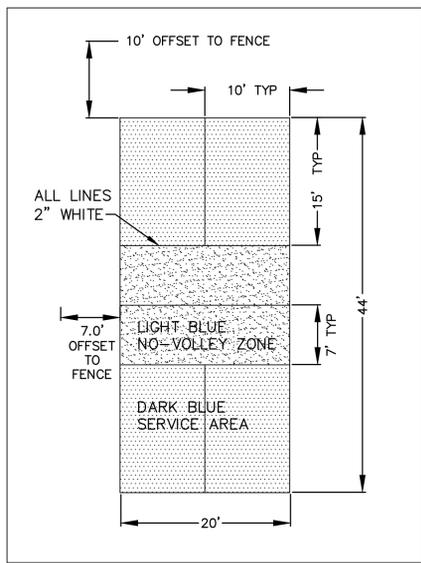
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**IMPROVEMENT PROJECT**  
**PARK FACILITIES CONSTRUCTION II**



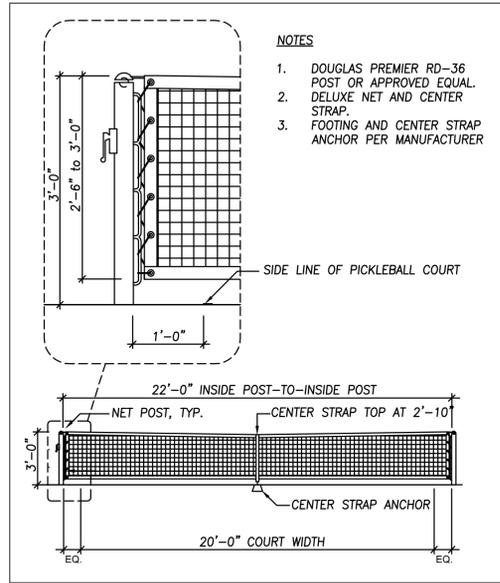
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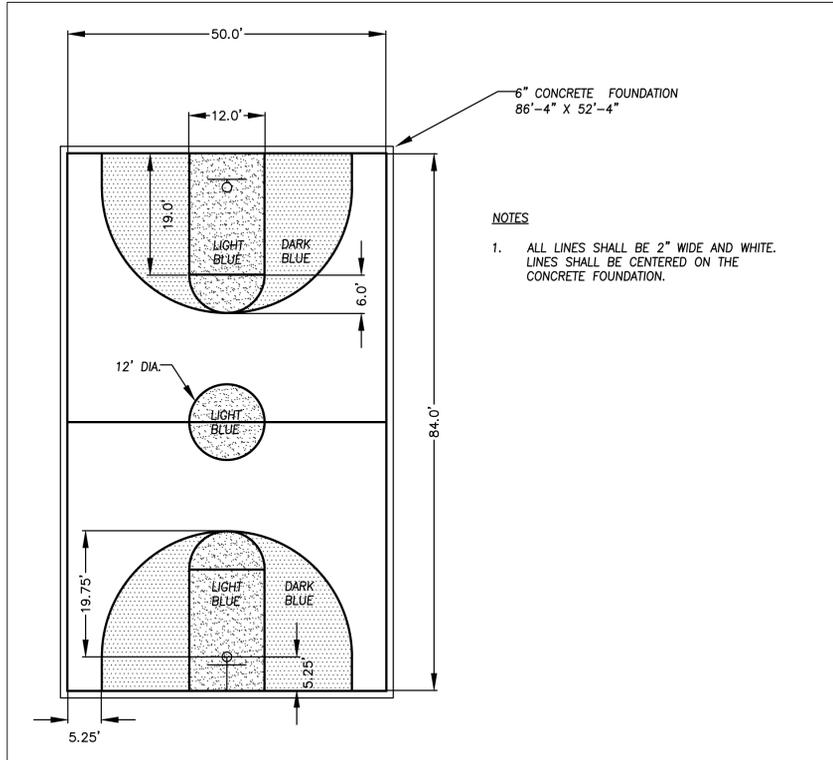
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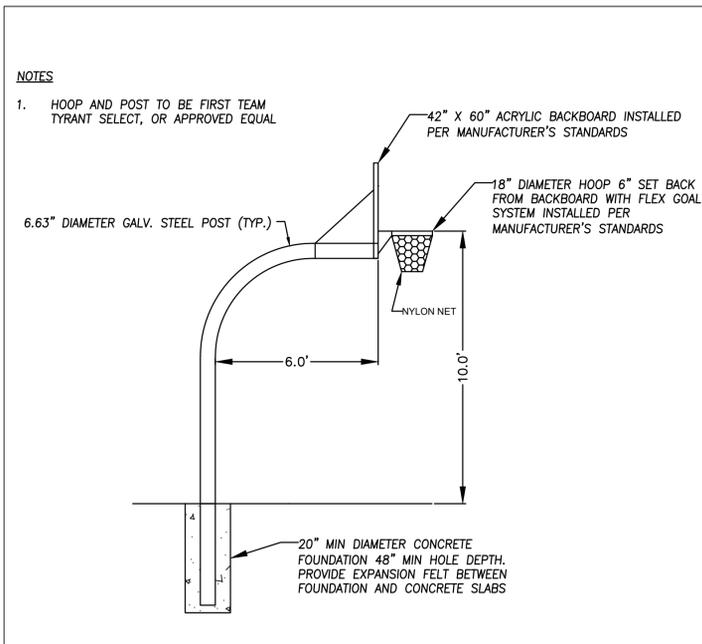
**A** PICKLEBALL COURT LAYOUT  
14 NOT TO SCALE



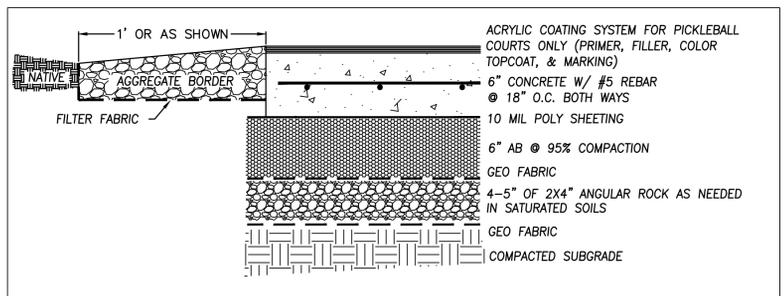
**B** POST AND NET  
14 NOT TO SCALE



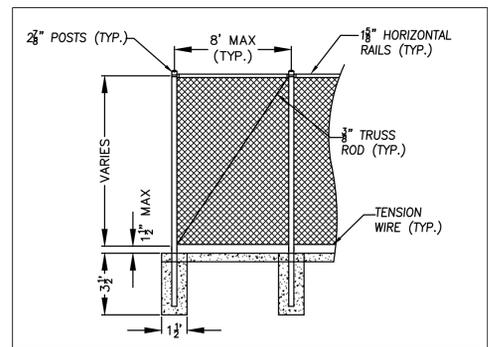
**C** BASKETBALL COURT LAYOUT  
14 NOT TO SCALE



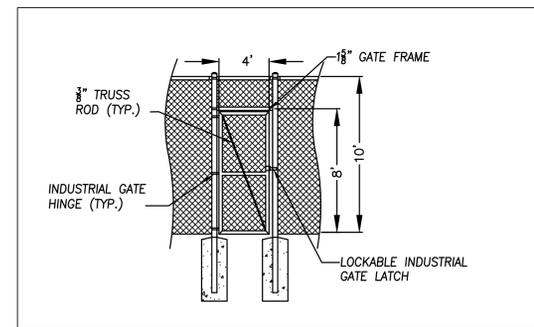
**D** POST AND HOOP  
14 NOT TO SCALE



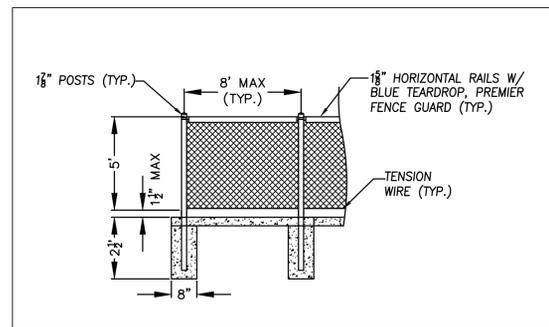
**E** COURT SECTIONS  
14 NOT TO SCALE



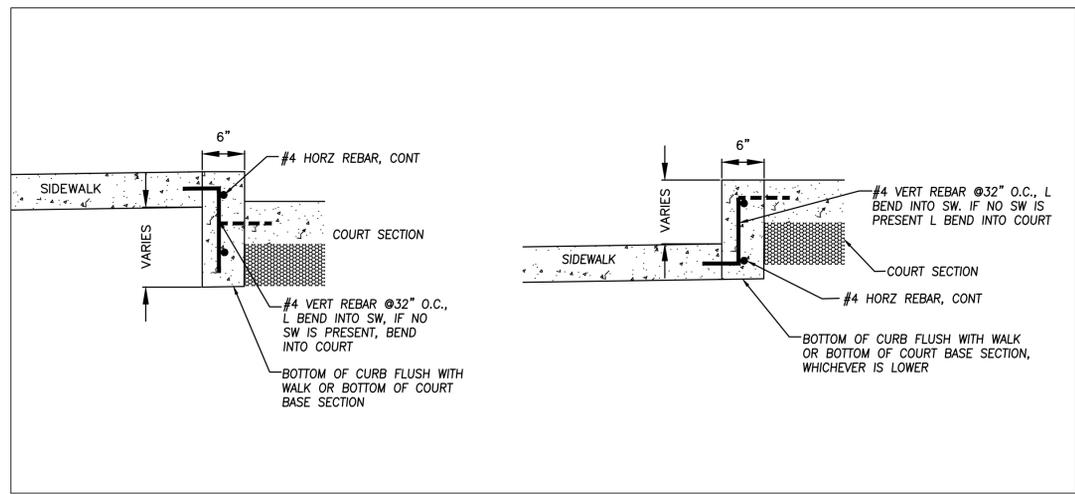
**F** 6-10' CHAIN LINK FENCE  
14 NOT TO SCALE



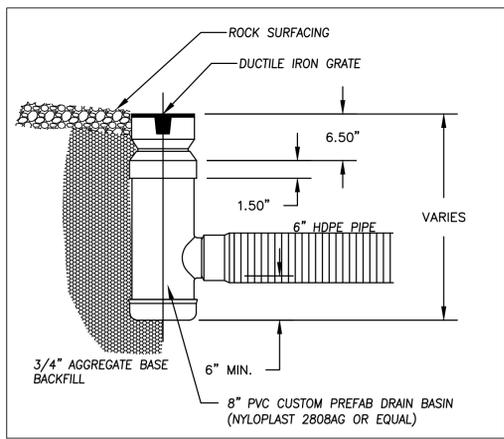
**G** 4' WIDE CHAIN LINK GATE  
14 NOT TO SCALE



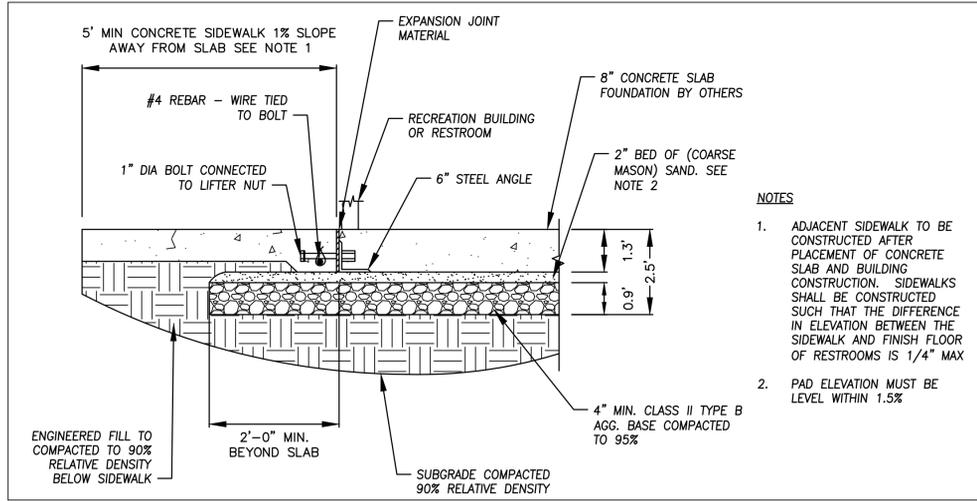
**H** 4-5' CHAIN LINK FENCE  
14 NOT TO SCALE



**I** RETAINING CURBS  
14 NOT TO SCALE



**J** AREA DRAIN  
14 NOT TO SCALE



**K** BUILDING FOUNDATION  
14 NOT TO SCALE

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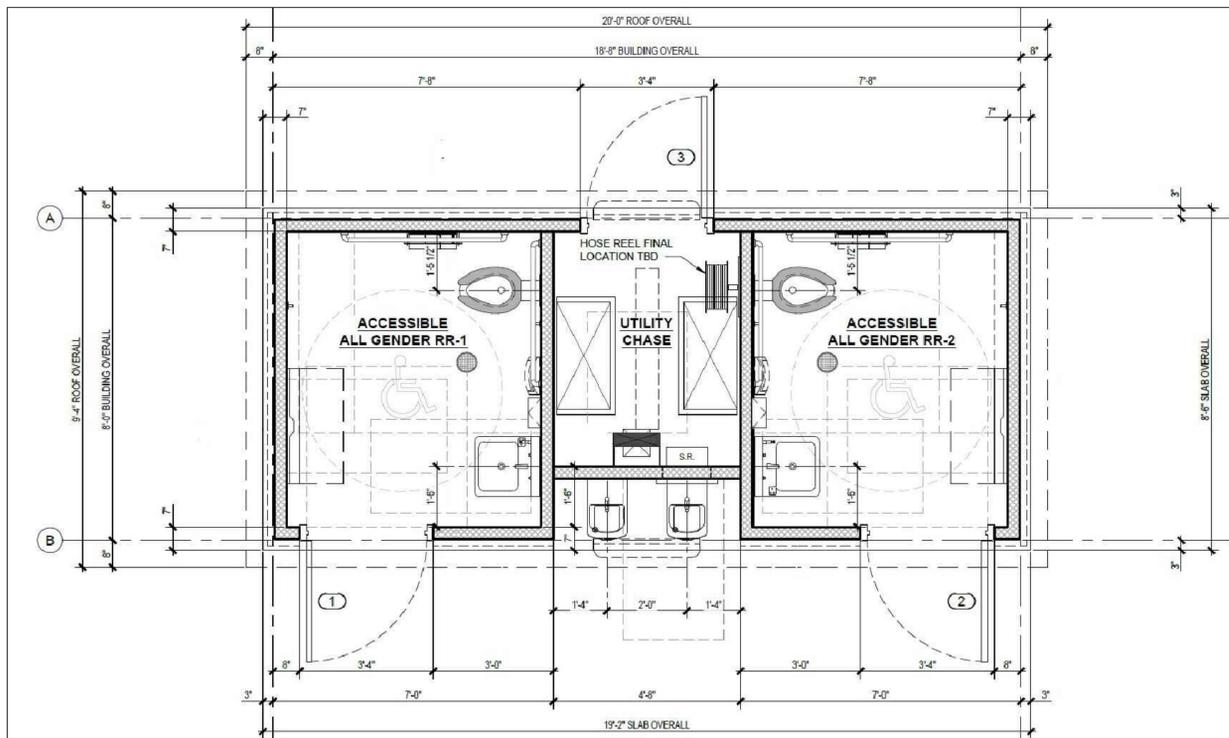
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**CDBG MEMORIAL PARK FACILITIES IMPROVEMENT PROJECT**  
 DETAILS I



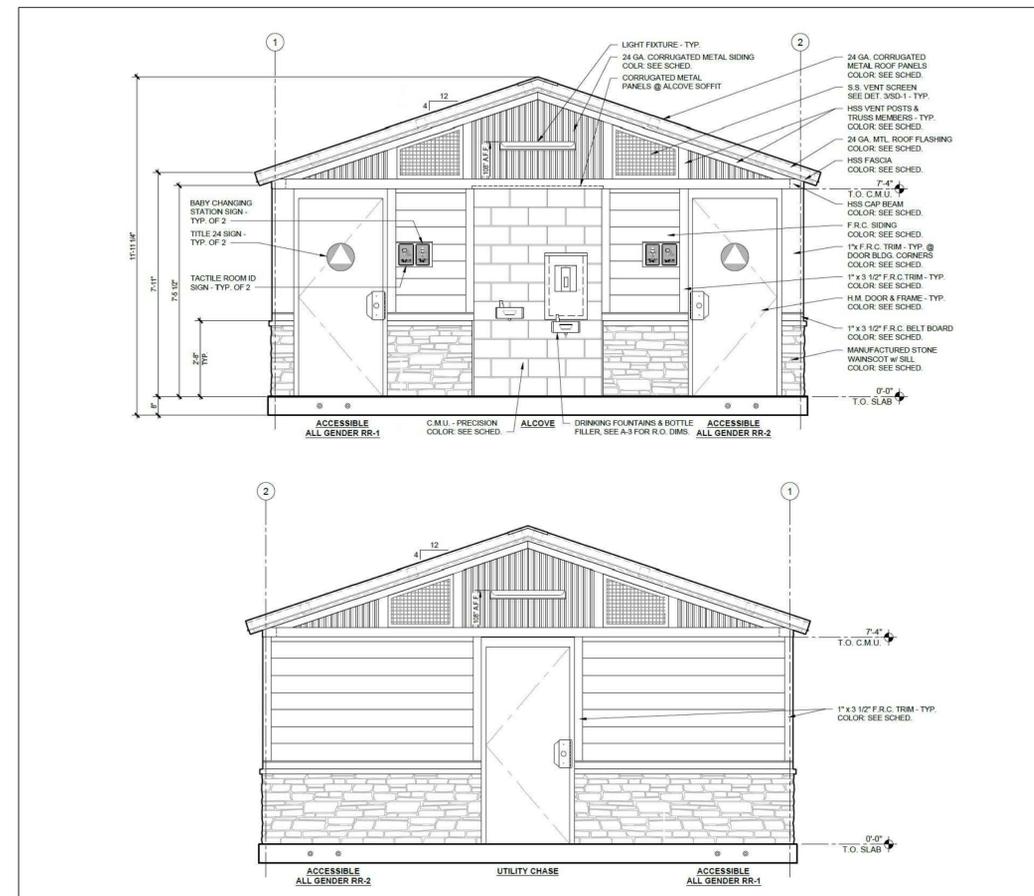
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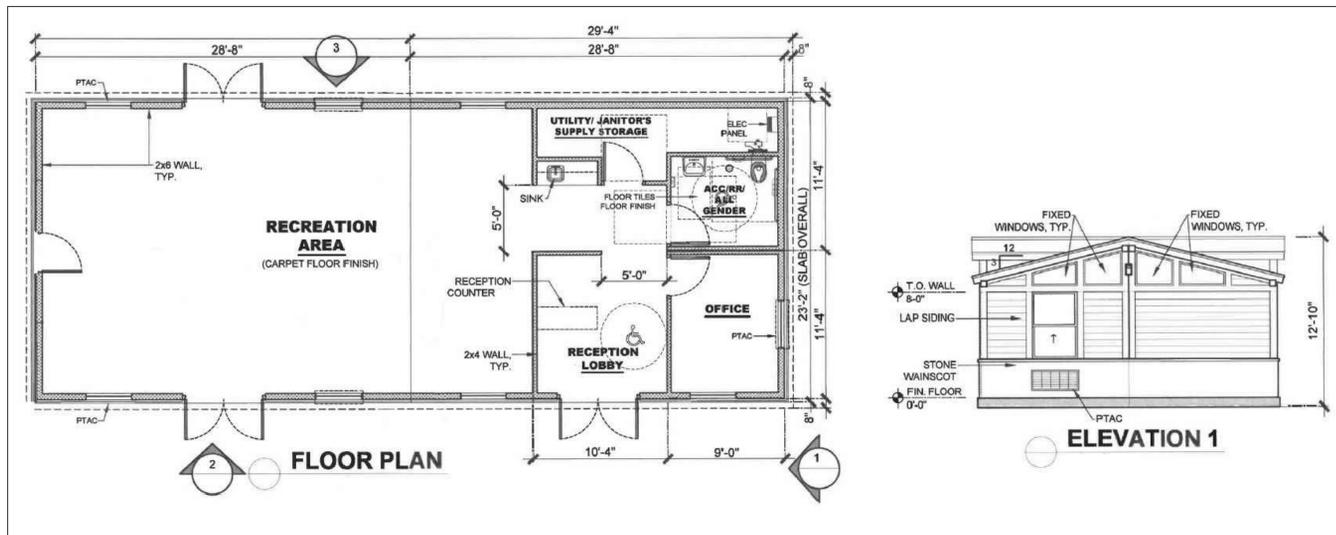
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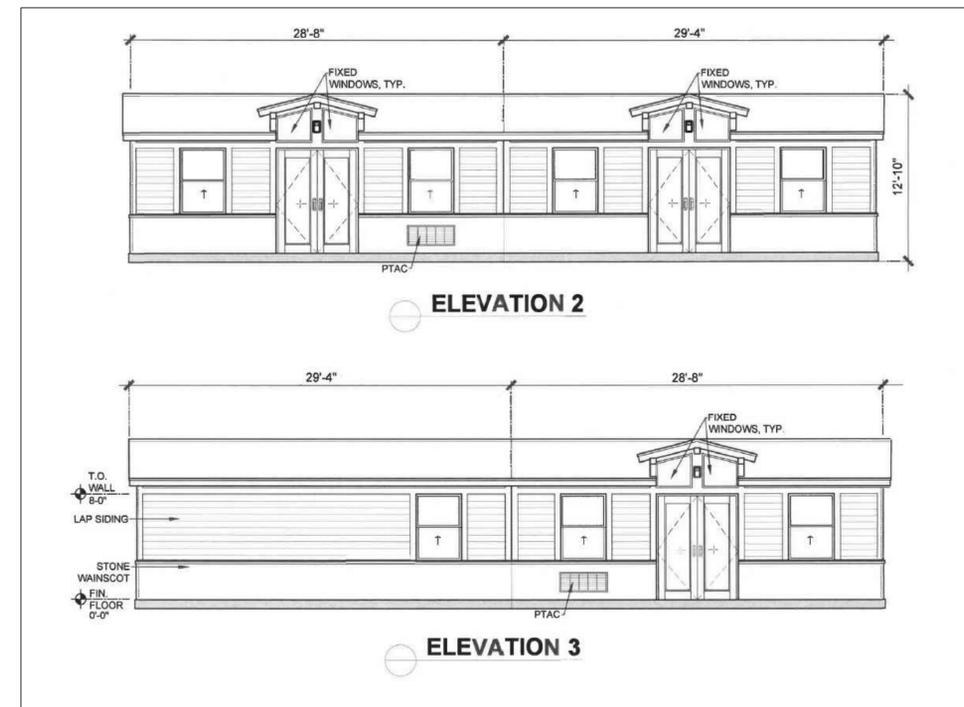
**A** BUILDINGS DETAIL 1  
15 NOT TO SCALE



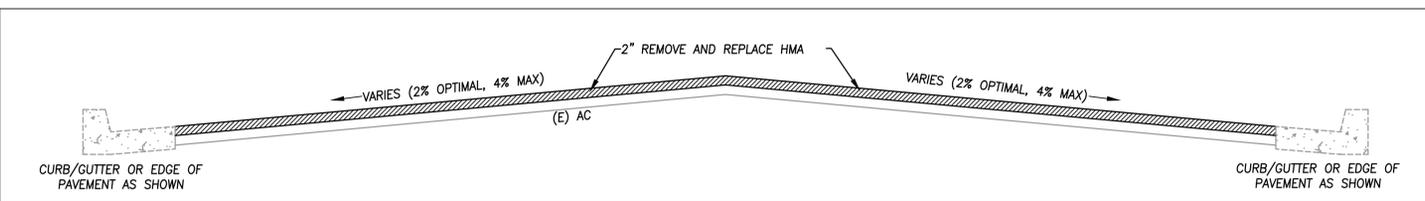
**B** BUILDINGS DETAIL 2  
15 NOT TO SCALE



**C** BUILDING DETAIL 3  
15 NOT TO SCALE



**D** BUILDINGS DETAIL 2  
15 NOT TO SCALE



**E** 2" REMOVE AND REPLACE HMA  
15 NOT TO SCALE

**NOTES**

1. BUILDING DETAILS ARE CONCEPTUAL ONLY. FINAL DESIGN TO BE DETERMINED THROUGH CONSULTATION WITH THE CONTRACTOR AND THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR ALL DESIGN AND PERMITTING. BUILDINGS MAY BE PREFAB OR BUILT ON SITE AT THE CONTRACTOR'S DISCRETION.

**NOTE:**

THE CITY OF GRASS VALLEY OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

| REVISIONS |             | APPROVAL  | Date |
|-----------|-------------|-----------|------|
| No.       | Description | Engr Init | By   |



PROJECT NUMBER:  
**20-05**

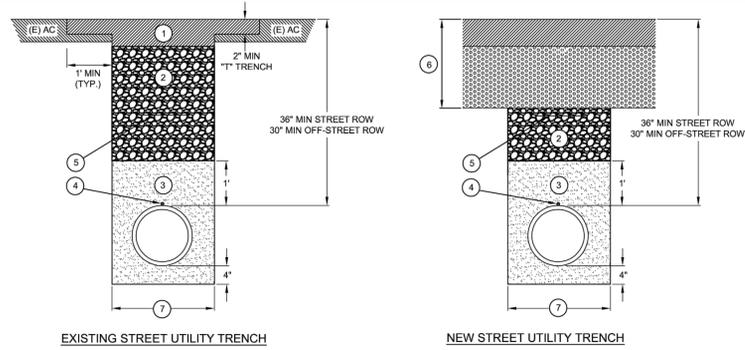
CITY OF GRASS VALLEY ENGINEERING DIVISION  
**CDBG MEMORIAL PARK FACILITIES  
 IMPROVEMENT PROJECT  
 DETAILS II**



DRAWN BY: **SEH** DATE: **JAN 2021**  
 CHECKED BY: **BPJ** DATE: **APR 2021**

DRAWING NUMBER:  
**2165**

SHEET NUMBER:  
**15 of 17**



**NOTES:**

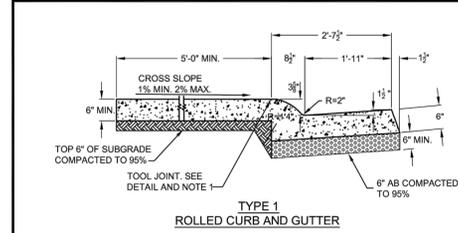
- AC PATCH, 4 INCHES THICK OR THAT OF EXISTING, WHICHEVER IS GREATER. T-TRENCH MAY BE ACHIEVED BY SAWCUT OR GRIND AND REMOVE. TACK COAT ON ALL PAVEMENT SURFACES (TYP.). SURFACE OF TRENCH EDGES SHALL BE SEAL COATED.
- AB PROCESSED TO 95% RELATIVE COMPACTION OR TWO SACK SLURRY CEMENT WITH CITY ENGINEER APPROVAL.
- IMPORTED SAND BEDDING: MECHANICALLY CONSOLIDATED OR SHOVEL SLICED UNDER THE HAUNCHES OF THE PIPE.
- #10 TRACING WIRE SECURED TO TOP OF WATER MAINS.
- BACKFILL TAPE LOCATED 12"-24" BELOW FINISH GRADE FOR ALL SEWER AND WATER MAINS.
- STREET STRUCTURAL SECTION PER APPROVED PLANS.
- TRENCH WIDTH IS FROM UNDISTURBED TRENCH SIDES. OD + 12" MIN, OD + 24" MAX.

**PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
UTILITY TRENCH BEDDING  
BACKFILL AND PAVING**

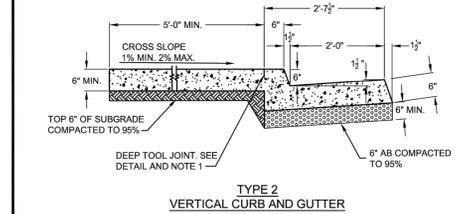
APPROVED BY: *Jim M. Baker*  
PUBLIC WORKS DIRECTOR / CITY ENGINEER

SCALE: NONE DRAWN BY: EAD DATE: MAY 12, 2012 **ST - 2**

**UTILITY TRENCH**



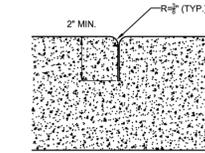
**TYPE 1  
ROLLED CURB AND GUTTER**



**TYPE 2  
VERTICAL CURB AND GUTTER**

**NOTES:**

- 2" DEEP TOOL JOINT AT BACK OF CURB FOR ALL MONOLITHIC CURB, GUTTER AND SIDEWALK.
- AGGREGATE BASE, COMPACTED TO 95%, MAY BE SUBSTITUTED FOR NATIVE SUBGRADE UNDER THE SIDEWALK SECTION.



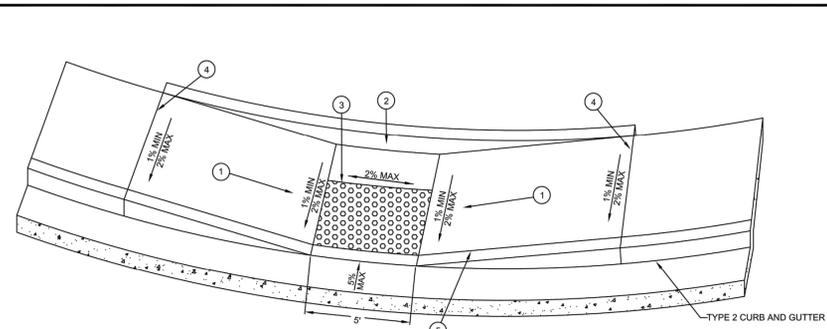
**DEEP TOOL JOINT DETAIL**

**PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
CURB, GUTTER  
AND SIDEWALK**

APPROVED BY: *Jim M. Baker*  
PUBLIC WORKS DIRECTOR / CITY ENGINEER

SCALE: NONE DRAWN BY: EAD DATE: MAY 12, 2016 **ST - 3**

**CURB, GUTTER AND SIDEWALK**



**TYPE 2 CURB AND GUTTER**

**LEGEND:**

- THE MAXIMUM SLOPE IN THE DIRECTION OF TRAVEL IS 8.33%. IF LONGITUDINAL STREET GRADE ALLOWS, ON STEEPER GRADES WHERE 8.33% CANNOT BE ACHIEVED, 20 FEET IS THE MAXIMUM LENGTH TRANSITION REQUIRED WITH THE PUBLIC WORKS DIRECTOR / CITY ENGINEERS APPROVAL.
- 6 INCH WIDE RETAINING CURB, AS REQUIRED, POURED MONOLITHICALLY WITH SIDEWALK. HEIGHT TO BE DETERMINED BY PROJECTED BACK OF WALK GRADE; MINIMUM DEPTH SECTION FLUSH WITH BOTTOM OF SIDEWALK.
- 3' X 5' DETECTABLE WARNING SURFACE PER CALTRANS STANDARD PLANS.
- EXPANSION JOINT.
- DEEP TOOL JOINT, SEE CURB, GUTTER AND SIDEWALK DETAIL.
- TRANSITION FROM RAMP LANDING TO STREET SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.

**PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
CURB RAMP DETAIL  
CASE "C"**

APPROVED BY: *Jim M. Baker*  
ASSISTANT CITY ENGINEER

SCALE: NONE DRAWN BY: CAD DATE: NOV 5, 2018 **ST - 6**

**CURB RAMP**

**2018 STANDARD PLAN B3-7A**

**TYPE 6A WALL**

**TYPE 6B WALL**

**REINFORCING STEEL, DIMENSIONS AND DATA**

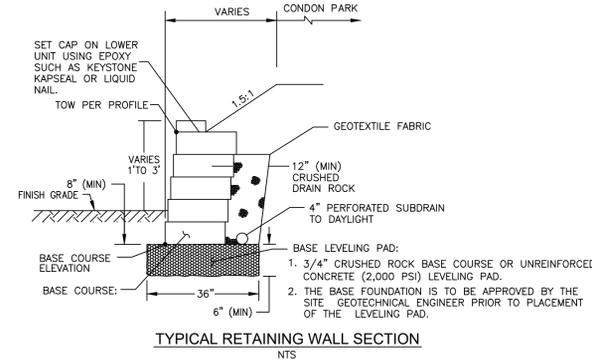
| DESIGN            | 3'-0"    | 4'-0"    | 4'-6"    | 5'-0"    | 6'-0"    |
|-------------------|----------|----------|----------|----------|----------|
| HEIGHT            | 3'-0"    | 4'-0"    | 4'-6"    | 5'-0"    | 6'-0"    |
| REINFORCING STEEL | #5 @ 16" | #5 @ 16" | #5 @ 16" | #5 @ 16" | #5 @ 16" |
| REINFORCING STEEL | #5 @ 16" | #5 @ 16" | #5 @ 16" | #5 @ 16" | #5 @ 16" |
| REINFORCING STEEL | #5 @ 16" | #5 @ 16" | #5 @ 16" | #5 @ 16" | #5 @ 16" |
| REINFORCING STEEL | #5 @ 16" | #5 @ 16" | #5 @ 16" | #5 @ 16" | #5 @ 16" |

**RETAINING WALL TYPE 6 (CASE 1)**  
NO SCALE **B3-7A**

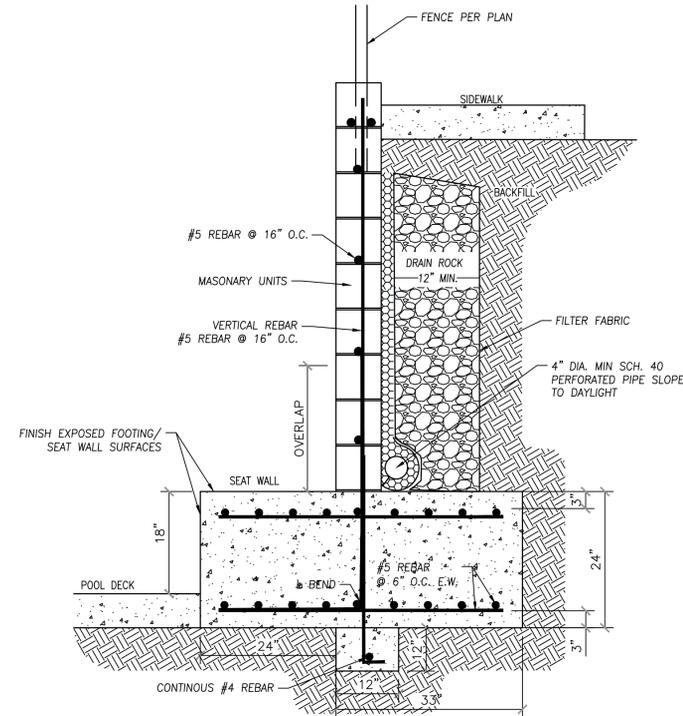
**CMU RETAINING WALL**

**NOTES:**

- KEYSTONE RETAINING WALLS SHALL BE CONSTRUCTED PER THE MANUFACTURER'S SPECIFICATIONS (LATEST EDITION) AND THE NOTES AND DETAILS SHOWN ON THESE PLANS.
- CONCRETE UNITS
  - MODULAR WALL UNITS SHALL BE KEYSTONE (TAN 333 COLOR) RETAINING WALL UNITS AS MANUFACTURED BY BASALITE IN ACCORDANCE WITH ASTM C-90 AND ASTM C-140.
  - CONCRETE WALL UNITS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI. NORMAL WEIGHT CONCRETE SHALL HAVE A MAXIMUM MOISTURE ABSORPTION OF 13%, MEDIUM WEIGHT MAXIMUM OF 15%, AND HAVING A LIGHT WEIGHT MAXIMUM MOISTURE ABSORPTION OF 15%.
  - DIMENSIONAL TOLERANCES SHALL BE IN ACCORDANCE WITH ASTM C-90 EXCEPT THOSE MEASURED TO THE SPLIT FACE WHICH VARY UNITS SHALL HAVE A MINIMUM OF 1/32" FT. FACE AREA EACH.
  - UNITS SHALL HAVE ANGLED SIDES CAPABLE OF CONCAVE AND CONVEX ALIGNMENT CURVES WITH A MINIMUM RADIUS OF 3.5 FEET. FOR STRAIGHT WALLS USE NON-ANGLED STRAIGHT SIDE CAP UNITS.
- FIBERGLASS CONNECTING PINS
  - CONNECTING PINS SHALL BE 1/2" DIAMETER THERMOSET ISOPHTHALIC POLYESTER RESIN-PULTRUDED FIBERGLASS REINFORCEMENT RODS SUPPLIED BY THE UNIT MANUFACTURER.
  - PINS SHALL HAVE A MINIMUM FLEXURAL STRENGTH OF 128,000 PSI AND SHORT BEAM SHEAR OF 6,400 PSI.
- KEYSTONE KAPSEALTM
  - CONSTRUCTION ADHESIVE MATERIAL SHALL CONFORM TO ASTM 2339 AND SHALL BE SUPPLIED BY THE KEYSTONE UNIT SUPPLIER.
- EXCAVATION
  - CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS. CITY'S REPRESENTATIVE SHALL INSPECT THE EXCAVATION AND APPROVE PRIOR TO PLACEMENT OF LEVELING MATERIAL OR FILL SOILS. PROOF ROLL FOUNDATION AREA AS DIRECTED TO DETERMINE IF REMEDIATION WORK IS REQUIRED.
  - OVER-EXCAVATION AND REPLACEMENT OF UNSUITABLE FOUNDATION SOILS AND REPLACEMENT WITH APPROVED COMPACTED FILL WILL BE COMPENSATED AS AGREED UPON WITH THE OWNER. BASE LEVELING PAD.
  - THE MAXIMUM CALCULATED APPLIED BEARING PRESSURE OF THE WALLS IS PROVIDED IN THE CALCULATION. THE PROJECT GEOTECHNICAL ENGINEER SHALL CALCULATE ALLOWABLE BEARING CONDITIONS PRIOR TO CONSTRUCTION OF WALLS.
- BASE LEVELING PAD
  - LEVELING PAD MATERIAL SHALL BE PLACED TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS, TO A MINIMUM THICKNESS OF 6" INCHES AND EXTEND LATERALLY A MINIMUM OF 6" IN FRONT AND BEHIND THE MODULAR WALL UNIT.
  - SOIL LEVELING PAD MATERIALS SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY PER ASTM D-698.
  - LEVELING PAD SHALL BE PREPARED TO INSURE FULL CONTACT TO THE BASE SURFACE OF THE CONCRETE UNITS.
- MODULAR UNIT INSTALLATION
  - FIRST COURSE OF UNITS SHALL BE PLACED ON THE LEVELING PAD AT THE APPROPRIATE LINE AND GRADE ALIGNMENT AND LEVEL SHALL BE CHECKED IN ALL DIRECTIONS AND INSURE THAT ALL UNITS ARE IN FULL CONTACT WITH THE BASE AND PROPERLY SEATED.
  - PLACE THE FRONT OF UNITS SIDE-BY-SIDE. DO NOT LEAVE GAPS BETWEEN ADJACENT UNITS. LAYOUT OF CORNERS AND CURVES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
  - INSTALL SHEAR/CONNECTING DEVICES PER MANUFACTURER'S RECOMMENDATIONS.
  - PLACE AND COMPACT DRAINAGE FILL WITHIN AND BEHIND WALL UNITS. PLACE AND COMPACT BACKFILL SOIL BEHIND DRAINAGE FILL. FOLLOW WALL ERECTION AND DRAINAGE FILL CLOSELY WITH STRUCTURE BACKFILL.
  - DRAINAGE STACKED VERTICAL HEIGHT OF WALL UNITS, PRIOR TO UNIT DRAINAGE FILL AND BACKFILL PLACEMENT AND COMPACTION, SHALL NOT EXCEED TWO COURSES.
- BACKFILL MATERIAL
  - NATIVE FILL (FOUNDATION, REINFORCED, & RETAINED) SHALL POSSESS THE FOLLOWING MINIMUM CHARACTERISTICS: INTERNAL FRICTION ANGLE (φ): 35° COHESION: 0 PSF UNIT WEIGHT: 130 PCF
- BASE LEVELING AND FILTERING MATERIAL
  - FILTERING MATERIAL SHALL BE CLASS 2 PERMEABLE MATERIAL PER SECTION 68 OF THE STATE SPECIFICATIONS.
- REINFORCED BACKFILL PLACEMENT
  - THE DESIGN REQUIRES A NON-SATURATED BACKFILL MATERIAL. REINFORCED BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D998.
  - REINFORCED BACKFILL SHALL BE PLACED AND COMPACTED IN LIFTS NOT TO EXCEED 6 INCHES WHERE HAND COMPACTION IS USED OR 10 INCHES WHERE HEAVY COMPACTION EQUIPMENT IS USED. LIFT THICKNESS SHALL BE DECREASED TO ACHIEVE THE REQUIRED DENSITY AS REQUIRED.
  - ONLY LIGHTWEIGHT HAND-OPERATED EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET FROM THE TAIL OF THE MODULAR CONCRETE UNIT.
  - AT THE END OF EACH DAY'S OPERATION, THE CONTRACTOR SHALL SLOPE THE LAST LIFT OF REINFORCED BACKFILL AWAY FROM THE WALL UNITS TO DIRECT RUNOFF AWAY FROM WALL FACE. THE CONTRACTOR SHALL NOT ALLOW SURFACE RUNOFF FROM ADJACENT AREAS TO ENTER THE WALL CONSTRUCTION SITE.
  - GEOTEXTILE FABRIC SHALL BE GEO TEC 701. PRODUCTS OF EQUIVALENT FORMATION AND APPLICABILITY MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
- DRAIN PIPE
  - A 4-INCH DIAMETER PERFORATED PVC SCHEDULE 40 DRAINAGE PIPE SHALL BE INSTALLED AS ILLUSTRATED IN THE CONSTRUCTION DRAWINGS. THE PIPE SHALL BE INSTALLED AT A MINIMUM 2% SLOPE AND OUTLET TO A SUITABLE COLLECTION BASIN IN ACCORDANCE WITH LOCAL CODES. THE PERFORATIONS SHALL BE DIRECTED DOWN AND THE DRAINAGE PIPE SHALL BE SURROUNDED BY A MINIMUM OF 4-INCHES OF UNIT DRAINAGE FILL.
- CAP INSTALLATION
  - CAP UNITS SHALL BE GLUED TO UNDERLYING UNITS WITH AN ALL-WEATHER ADHESIVE APPROVED BY THE MANUFACTURER FOR THIS APPLICATION AND ACCEPTED BY KEYSTONE.



**KEYSTONE BLOCK RETAINING WALL**



**NOTES:**

- USE 60 KS: STEEL
- FM = 1,500 PSI
- COMPACTION EQUIPMENT SHOULD NOT BE USED DIRECTLY ADJACENT TO RETAINING WALLS UNLESS THE WALL IS DESIGNED OR BRACED TO RESIST THE ADDITIONAL LATERAL PRESSURES.
- SEE CALTRANS STANDARD PLAN B3-7A WALL DETAIL TYPE 6B WALL FOR ADDITIONAL SPECIFICATIONS.
- DRAIN ROCK SHOULD CONSIST OF CALTRANS CLASS II, PERMEABLE DRAINAGE MATERIAL PLACED DIRECTLY BEHIND THE WALL; OR CRUSHED WASHED ROCK ENVELOPED IN A NON- WOVEN GEOTEXTILE FILTER FABRIC SUCH AS AMOCO 4546 OR EQUIVALENT.

**SEAT RETAINING WALL**

**NOTE:**

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**CITY OF GRASS VALLEY ENGINEERING DIVISION  
CDBG MEMORIAL PARK FACILITIES  
IMPROVEMENT PROJECT  
DETAILS III**



DRAWN BY: **SEH** DATE: **JAN 2021**  
CHECKED BY: **BPJ** DATE: **APR 2021**

DRAWING NUMBER: **2165**  
SHEET NUMBER: **16 of 17**

PROJECT NUMBER: **20-05**

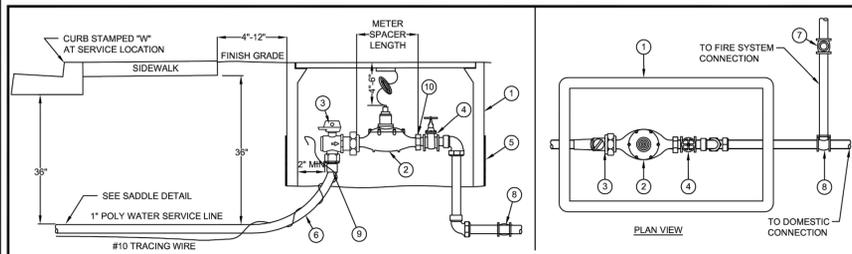


**REVISIONS**

| No. | Description | Engr Init | By | Date |
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**APPROVAL**

| Date | By |
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|      |    |



**LEGEND:**

- 1 CHRISTY B16 BOX WITH FL16D LID FOR 3/4" METER; CHRISTY N30 BOX WITH FL30D LID FOR 1" METER (OR APPROVED EQUAL)
- 2 WATER METER (CITY)
- 3 90° BRASS CURB STOP (CITY)
- 4 GATE OR BALL VALVE (PRIVATE)
- 5 CEMENT BOARD END PLATE (TYP.)
- 6 RADIUS 24" MIN.
- 7 SINGLE BRASS CHECK VALVE (PRIVATE)
- 8 TEE (PRIVATE)
- 9 POLY ADAPTOR
- 10 METER SPUD ADAPTOR (NOT NECESSARY FOR 1" METER)

**NOTES:**

1. WATER METERS SHALL BE PURCHASED THROUGH THE CITY. PURCHASE INCLUDES INSTALLATION.
2. ALL PIPE AND FITTINGS SHALL BE BRASS, WITH THE EXCEPTION OF THE SERVICE LINES.
3. BURIED BRASS PIPE AND FITTINGS SHALL BE WRAPPED WITH 10 MIL POLYETHYLENE OR APPROVED EQUAL.
4. METER SPACER (SEE DETAIL) SCH 80 PVC NPT PIPE NIPPLE WITH 5 EA. X 3/4" DIA. HOLES THROUGH BOTH SIDES

**METER SPACER:**

| METER SIZE | DIA  | LENGTH |
|------------|------|--------|
| 3/4"       | 3/4" | 7-1/2" |
| 1"         | 1"   | 7-3/4" |

**PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION**

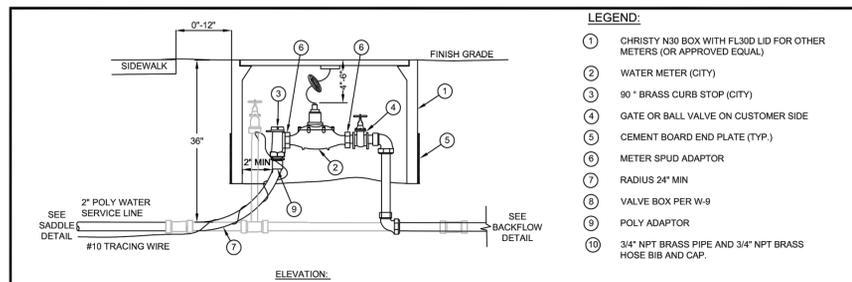
**3/4" & 1"  
SERVICES**

APPROVED BY: *Frank M. Bacc*  
PUBLIC WORKS DIRECTOR / CITY ENGINEER

SCALE: NONE DRAWN BY: EAD DATE: MAY 12, 2016 W-1

\\STANDARD\Standard Details\Water\W-1.dwg

**1" WATER SERVICE**



**LEGEND:**

- 1 CHRISTY N30 BOX WITH FL30D LID FOR OTHER METERS (OR APPROVED EQUAL)
- 2 WATER METER (CITY)
- 3 90° BRASS CURB STOP (CITY)
- 4 GATE OR BALL VALVE ON CUSTOMER SIDE
- 5 CEMENT BOARD END PLATE (TYP.)
- 6 METER SPUD ADAPTOR
- 7 RADIUS 24" MIN
- 8 VALVE BOX PER W-9
- 9 POLY ADAPTOR
- 10 3/4" NPT BRASS PIPE AND 3/4" NPT BRASS HOSE BIB AND CAP.

**NOTES:**

1. WATER METERS SHALL BE PURCHASED THROUGH THE CITY. PURCHASE INCLUDES INSTALLATION.
2. ALL PIPE AND FITTINGS SHALL BE BRASS, WITH THE EXCEPTION OF THE SERVICE LINES.
3. BURIED BRASS PIPE AND FITTINGS SHALL BE WRAPPED WITH 10 MIL POLYETHYLENE OR APPROVED EQUAL.
4. BYPASS FOR SERVICE LINE METERS ONLY NEEDED IF REQUESTED BY CITY.

**PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION**

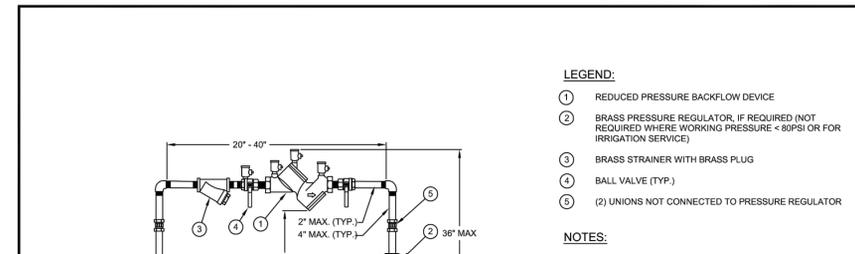
**1-1/2" & 2"  
SERVICES**

APPROVED BY: *Frank M. Bacc*  
PUBLIC WORKS DIRECTOR / CITY ENGINEER

SCALE: NONE DRAWN BY: EAD DATE: MAY 12, 2016 W-2

\\STANDARD\Standard Details\Water\W-2.dwg

**2" WATER SERVICE**



**LEGEND:**

- 1 REDUCED PRESSURE BACKFLOW DEVICE
- 2 BRASS PRESSURE REGULATOR, IF REQUIRED (NOT REQUIRED WHERE WORKING PRESSURE < 80PSI OR FOR IRRIGATION SERVICE)
- 3 BRASS STRAINER WITH BRASS PLUG
- 4 BALL VALVE (TYP.)
- 5 (2) UNIONS NOT CONNECTED TO PRESSURE REGULATOR

**NOTES:**

1. REDUCED PRESSURE BACKFLOW ASSEMBLY TO BE LOCATED AS CLOSE TO THE CITY WATER BOX AS POSSIBLE, 3' MAX.
2. NO WATER SHALL BE DRAWN THROUGH THE BACKFLOW DEVICE UNTIL IT HAS BEEN TESTED BY A CERTIFIED BACKFLOW TESTER. CITY INSPECTOR MUST RECEIVE CERTIFICATION PRIOR TO TURN ON.
3. THE BACKFLOW DEVICE SHALL BE INSULATED WITH A CITY APPROVED FREEZE PROTECTION BAG.

**PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION**

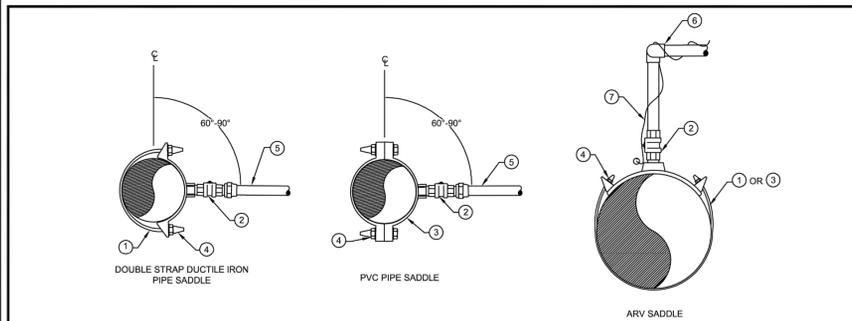
**RP BACKFLOW ASSEMBLY  
2" AND SMALLER SERVICE**

APPROVED BY: *Frank M. Bacc*  
PUBLIC WORKS DIRECTOR / CITY ENGINEER

SCALE: NONE DRAWN BY: EAD DATE: MAY 12, 2016 W-4

\\STANDARD\Standard Details\Water\W-4.dwg

**RP BACKFLOW**



**LEGEND:**

- 1 DOUBLE STRAP BRASS OR STAINLESS STEEL SADDLE FOR DUCTILE IRON MAIN
- 2 INSULATING BALL STYLE CORPORATION STOP OR NON INSULATED CORPORATION STOP WITH NYLON BUSHING
- 3 BRASS OR STAINLESS STEEL SADDLE FOR PVC MAIN
- 4 ZINC CAPS ON ALL BOLTS (ONLY WITH NON-INSULATED CORPORATION STOP)
- 5 POLY SERVICE
- 6 SWING JOINT (2 - 90° BRASS FITTINGS)
- 7 #10 INSULATED TRACING WIRE

**NOTES:**

1. SADDLES SHALL BE WRAPPED IN 10 MIL POLYETHYLENE AND BACKFILLED WITH SAND.
2. TRACING WIRE SHALL BE REQUIRED ON ARV HYDRANT RUNS, BLOW OFF'S, SERVICES WITHOUT CONTINUOUS COPPER PIPE, AND OTHER MAJOR APPURTENANCES.

**PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION**

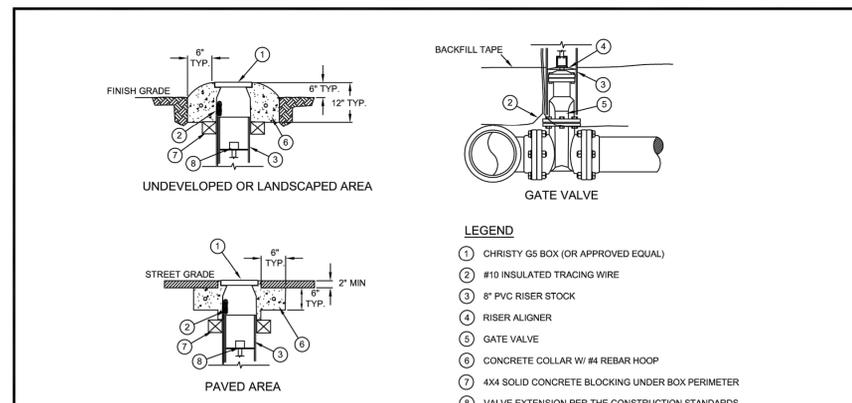
**SADDLE DETAIL**

APPROVED BY: *Frank M. Bacc*  
PUBLIC WORKS DIRECTOR / CITY ENGINEER

SCALE: NONE DRAWN BY: EAD DATE: MAY 12, 2016 W-8

\\STANDARD\Standard Details\Water\W-8.dwg

**SADDLE TAP**



**LEGEND:**

- 1 CHRISTY G5 BOX (OR APPROVED EQUAL)
- 2 #10 INSULATED TRACING WIRE
- 3 8" PVC RISER STOCK
- 4 RISER ALIGNER
- 5 GATE VALVE
- 6 CONCRETE COLLAR W/ #4 REBAR HOOP
- 7 4X4 SOLID CONCRETE BLOCKING UNDER BOX PERIMETER
- 8 VALVE EXTENSION PER THE CONSTRUCTION STANDARDS

**NOTES:**

1. TRACING WIRE THROUGH VALVE BOXES SHALL BE PLACED OUTSIDE OF RISER BUT INSIDE OF BOX.
2. TRACING WIRE SHALL BE SPLICED INSIDE THE VALVE BOX PER TRACING WIRE SPLICE DETAIL AND SHALL LOOP WITHIN THE VALVE BOX WITH 18" OF SLACK WIRE.
3. ALL GATE VALVES SHALL BE CENTERED IN A ONE PIECE RISER STOCK WITH THE USE OF A RISER ALIGNER.
4. OPERATOR NUTS DEEPER THAN 40 INCHES FROM FINISH GRADE SHALL REQUIRE A VALVE NUT EXTENSION, 2 FEET MINIMUM IN LENGTH.
5. VALVES AND FITTINGS SHALL BE WRAPPED AND SEALED IN 10 MIL POLYETHYLENE.
6. VALVE BOX IN PAVEMENT TO BE SET 1/2 INCH BELOW FINISHED GRADE.

**PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION**

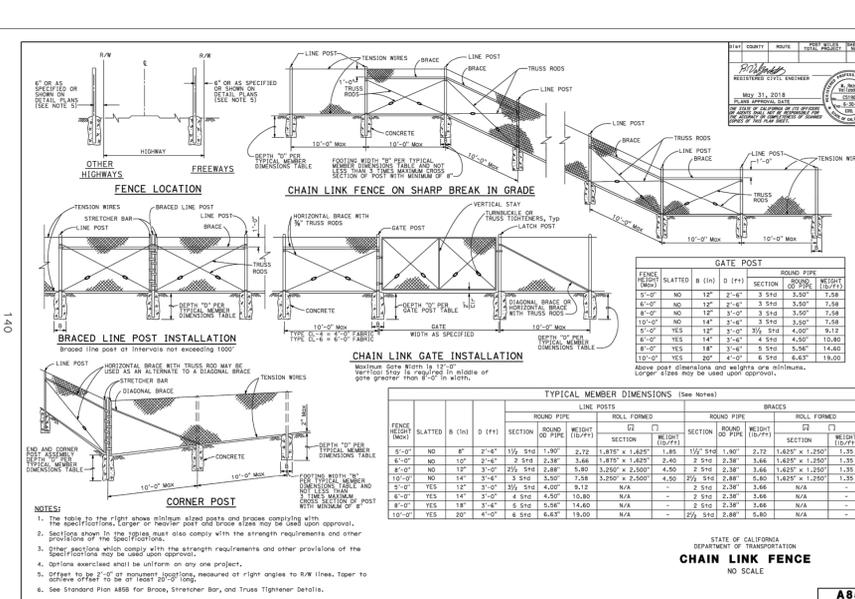
**GATE VALVE AND BOX**

APPROVED BY: *Frank M. Bacc*  
PUBLIC WORKS DIRECTOR / CITY ENGINEER

SCALE: NONE DRAWN BY: EAD DATE: MAY 12, 2016 W-9

\\STANDARD\Standard Details\Water\W-9.dwg

**GATE VALVE**



**CHAIN LINK FENCE**

NO SCALE

A65

\\STANDARD\Standard Details\Fence\F-1.dwg

**CHAIN LINK FENCE**

**NOTE:**

THE CITY OF GRASS VALLEY OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

**REVISIONS**

| No. | Description | Engr Init | By | APPROVAL | Date |
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PROJECT NUMBER:  
**20-05**

**CITY OF GRASS VALLEY ENGINEERING DIVISION**

**CDBG MEMORIAL PARK FACILITIES  
IMPROVEMENT PROJECT  
DETAILS IV**

2018 STANDARD PLAN ASS



DRAWN BY: **SEH** DATE: **JAN 2021**

CHECKED BY: **BPJ** DATE: **APR 2021**

DRAWING NUMBER:  
**2165**

SHEET NUMBER:  
**17 of 17**