## BID ITEM SUMMARY

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**GENERAL NOTES:**

1. ONLY PIPE MATERIALS SPECIFIED ON THIS SHEET ARE ACCEPTABLE FOR THIS PROJECT.
2. WHERE MANUAL TRENCH WORK IS NOTED AS U.N.T. UNDISTURBED, PIPE SIZES ARE SPECIFIED FOR A POSITIVE PROJECTING OR DAMP-BASED TRENCH CONDITION.
3. SIZES AND SIZES SPECIFIED FOR DISTURBED THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING WHETHER)-- IF ALTERNATE PIPE MATERIALS ARE SELECTED AT NO ADDITIONAL COST TO THE CITY.
4. Attach hundreds. (9000, shall have alternating joints.)

---

**ALTERNATE PIPE CHART**

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

RIVERVIEW DRIVE
18TH PL. TO 22ND ST
STEB110072
STRUCTURAL EXCAVATION AND BACKFILL NOTES:

1. Following structural excavation, the exposed surface shall be evaluated by the excavation contractor. The structural engineer shall determine if additional excavation or reinforcement is required prior to the commencement of any backfilling operations.

2. The box culvert and channel retention wall foundations shall be designed on a line of centers offset by 8 feet from the site boundary. The excavation depth shall be a minimum of 8 feet below grade. The excavation depth shall be determined by the structural engineer in accordance with AASHTO 12.5.

3. All excavations shall be labeled and signed in accordance with current state excavation and trench safety standards. The final excavation evaluation report and all local, state, and federal regulations.

4. Notice is given that any work done or to be done in accordance with these plans is subject to the excavations required. No additional payment will be made to maintain excavation.

5. See Fig. 09 for additional retaining wall structural backfill information.
NOTES:

1. All excavations shall be sloped and braced in the interest of safety in accordance with current OSHA excavations and trench safety standards. The final construction excavation should be cut to the final grade. See notes & OGS No 63.

2. Nothing shown on the plans shall be taken to imply non-compliance with current laws. The contractor shall be responsible for providing permanent excavation and/or backfilling. Contractor shall be responsible for the excavation required and no additional payment will be made to maintain compliance.

3. The channel transition structures shall be founded on a 10'x10'x10' concrete footing. The concrete footing shall be constructed using a minimum of 3,000 psi concrete. The concrete shall be placed in accordance with the manufacturer's instructions. The concrete shall be placed in accordance with the manufacturer's instructions.

4. Placement of the channel shall be completed by the contractor.

5. All excavation areas shall be cleaned and graded to the final grade. All debris shall be removed from the site.

6. All backfilling shall be completed in accordance with current laws. The backfilling shall be completed in accordance with the manufacturer's instructions. The backfilling shall be completed in accordance with the manufacturer's instructions.

SECTION

CHANNEL TRANSITION STRUCTURE

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* Length of bay includes nose.
HARDCORE CONSTRUCTION NOTES:

PROJECT IN PLACE:

EXISTING ASPHALT MAINTENANCE ROAD TRAIL PROTECT IN PLACE

EXISTING SAFETY ACCESS CONTROL DEVICE TO TERMINATE NEEDED PROTECT IN PLACE

EXISTING TRAFFIC SIGNALS AND CROSSWALKS CHECKED AND MAINTAINED PROTECT IN PLACE

EXISTING TRANSIT BARRIER PROTECT IN PLACE

REMOVAL:

1. ШАУРТО УТАЖОК ИЗ СУЩЕСТВУЮЩЕЙ АСФАЛТИРОВАННОЙ ГРУНТСТРОЕНИЯ
2. УСТРОЙСТВО ДОРОЖНОЙ ОБОРОТКИ К СУЩЕСТВУЮЩЕЙ ДОРОГЕ

CONSTRUCTION:

1. ОБУСТРОЙСТВО АСФАЛТИРОВАННОЙ ГРУНТСТРОЕНИЯ ПЕРЕД КОШЕЛЬКОМ
2. УСТРОЙСТВО БАШЕН ИЗ СУЩЕСТВУЮЩЕЙ ДОРОГИ НА НОВОЕ МЕСТО
3. ОБУСТРОЙСТВО АСФАЛТИРОВАННОЙ ГРУНТСТРОЕНИЯ ПЕРЕД КОШЕЛЬКОМ
4. УСТРОЙСТВО БАШЕН ИЗ СУЩЕСТВУЮЩЕЙ ДОРОГИ НА НОВОЕ МЕСТО
5. ОБУСТРОЙСТВО АСФАЛТИРОВАННОЙ ГРУНТСТРОЕНИЯ ПЕРЕД КОШЕЛЬКОМ
6. УСТРОЙСТВО БАШЕН ИЗ СУЩЕСТВУЮЩЕЙ ДОРОГИ НА НОВОЕ МЕСТО
7. ОБУСТРОЙСТВО АСФАЛТИРОВАННОЙ ГРУНТСТРОЕНИЯ ПЕРЕД КОШЕЛЬКОМ
8. УСТРОЙСТВО БАШЕН ИЗ СУЩЕСТВУЮЩЕЙ ДОРОГИ НА НОВОЕ МЕСТО

ARCHITECTURAL GARDEN BASKET PLANTER PER DTL, "B", SHT ED-1.2

ARCHITECTURAL GARDEN BASKET WALL PER DTL, "B", SHT ED-1.2

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GABION WALL DETAIL

SCALE 1\' = 1'-0"
RETTAINING WALL & PARAPET BARRIER ELEVATION

1. RETAINING WALL & PARAPET BARRIER ELEVATION

2. 4'-6" HIGH PARAPET BARRIER ELEVATION

- Internally colored concrete parapet barrier with light sand blast finish. See structural plans. Color: 1317003 Custom Airport Beige

- "V" groove joint per Rail 2, Sheet 3.2.2

- Top of retaining wall/bottom of parapet barrier/sidewalk finish grade.}

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CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT
RIVIERVIEW DRIVE
18th PL TO 22nd ST.
ST8510072

WALL RUSTICATION DETAILS

NOTE:

- Cost of furnishes, rebar strips, stainless steel vertical, colored concrete, concrete finishing, and other items related to wall rustication shall be considered incidental to the cost of the retaining wall & parapet barriers.

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J2 engineering and environmental design
777 west saddle peak pkwy, suite 100, peoria, az 85381
phoenix, az 85021
(602) 385-2017
LANDSCAPE NOTES

1. FINAL SUBDIVISION PERMIT CANNOT BE OBTAINED UNTIL BOND OR APPROVED ASSURANCES IS PROVIDED FOR THE LANDSCAPING WITHIN THE RESIDUARY.

2. NO PLANT SUBSTITUTION TYPE OR DUPLICATE PLANTS WILL BE ALLOWED ON PLANT MATERIALS LICENSED MATERIALS FOR THE APPROVED LANDSCAPE DESIGN PLANT MATERIALS WITHOUT PRIOR APPROVAL FROM THE CITY OF PHOENIX AT 602-262-3403.

3. ALL PLANT MATERIAL SPECIFICATIONS TO CONFIRM TO THE ARIZONA NAHRMANN ASSOCIATION STANDARDS.

4. ALL INSTALLED PLANT MATERIAL TO BE IN COMPLIANCE WITH THE DEPARTMENT OF WATER RESOURCES LOW WATER USE PLANT LIST.

5. VESSEL OWNERSHIP OF ALL PLANT MATERIALS OF IRON OR PLASTIC CONSTRUCTION LOCATED IN PUBLIC RESIDUARY, OBTAIN PERMIT FROM PARKS AND RECREATION DEPARTMENT (PARD) IN ADVANCE TO PREVENT LOSS OR REMOVAL OF ANY PLANT MATERIAL OR EQUIPMENT.

6. ALL PLANT MATERIALS TO BE IN PLACE AND PROPERLY PLANTED BY 1ST OF MARCH OR WITH THE CONTRACTORS IN WRITING FOR DELAYS OF MATERIALS BEING DELIVERED TO THE SITE.

7. ALL EXISTING TREES AND SHRUBS OF RIGHT-OF-WAY DESIGNATED TO REMAIN BUT FINAL PLANT MATERIALS TO BE PLANTED IN PLACES AND TIMES AS APPROVED BY THE CONTRACTOR OR THE CITY'S RECREATION DEPARTMENT PRIOR TO THE INSTALLATION OF NEW PLANT MATERIALS.

8. ALL EXISTING PLANT MATERIALS FOR LAWN AND LANDSCAPE INSTALLATION TO BE PLANTED創造 063-589-3403.

9. EXISTING CITY OF PHOENIX PLANT MATERIALS SHALL BE MOVED TO A NEW LOCATION NEARBY OR CONNECTED TO THE NEW SYSTEM, MAINTAINED THROUGH IRRIEATION REQUIREMENTS, AND NOT DISPOSED OF OR DISCARDED OF WITHOUT APPROVAL OF THE CONTRACTOR OR THE CITY'S RECREATION DEPARTMENT.

10. ALL GRASSES, ACCESSES TO RIGHT-OF-WAY SHALL BE A MINIMUM OF 5' X 10' MINIMUM, AND HAVE A MINIMUM DRY WEIGHT OF 6' PER 1000 SQUARE FEET. ALL CANVASS MUST PROVIDE PROPERLY LAYED RAMPS TO THE MEETING OF THE TRANSFER FREE ACT (CA) STANDARDS.

11. ALL PLANT MATERIALS INSTALLED AS PART OF THE LANDSCAPE PLAN BUT ARE SHOWN FOR REFERENCE ONLY.

12. ALL RIGHT-OF-WAY PLANT MATERIAL TO BE IN COMPLIANCE WITH THE DEPARTMENT OF WATER RESOURCES LOW WATER USE PLANT LIST.

13. IRONWORKS AND/OR PERMITS ON PLANT MATERIALS SHALL HAVE A PLUMBING PERMIT AND PERMITS, REQUIRE APPROPRIATE APPROVAL PRIOR TO INSTALLATION.

14. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL LAWS, CODES AND REGULATIONS APPLICABLE TO THE WORK COVERED BY THESE PLANS AND SPECIFICATIONS.

15. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND CARRYING ALL PERMITS REQUIRED TO COMPLETE THE LANDSCAPE CONTRACTIONS PRIOR TO THE WORK BEING COVERED BY THESE PLANS AND SPECIFICATIONS.

16. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND ADDITIONAL COSTS DUE DURING LANDSCAPE CONSTRUCTION OPERATIONS, ALL DAMAGES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

17. ALL GROUNDS AND HOMES IN TOWNHOME, HOMESTEAD, OR ANY OTHER AREAS, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND ADDITIONAL COSTS DUE DURING LANDSCAPE CONSTRUCTION OPERATIONS, ALL DAMAGES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

19. ALL GROUNDS AND HOMES IN TOWNHOME, HOMESTEAD, OR ANY OTHER AREAS, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

20. ALL GROUNDS AND HOMES IN TOWNHOME, HOMESTEAD, OR ANY OTHER AREAS, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

21. ALL GROUNDS AND HOMES IN TOWNHOME, HOMESTEAD, OR ANY OTHER AREAS, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

22. ALL GROUNDS AND HOMES IN TOWNHOME, HOMESTEAD, OR ANY OTHER AREAS, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
INSTALLATION GENERAL NOTES

1. All materials and equipment shall be furnished in accordance with the specifications and installation details for this and related work prior to construction.

2. Coordinate utilities located "shall be cut before you date" of underground utilities prior to construction.

3. Do not proceed with the installation of the irrigation system until it is approved by the owner or his representative or unless otherwise noted in the specifications or submittals. Extensions of delivery of materials shall be confirmed with the owner or his representative.

4. The drawings are schematic. Therefore, the following should be noted:

   a. Isolation components may be shown outside phasing areas for clarity only. No change will be made to the isolation components. All changes will be made upon request of the engineer.

   b. Use only standard tee and elbow fittings. Use of cross type fittings is not permitted.

5. Provide the following components to the owner prior to the completion of the project:

   a. Two operating keys for each type of manually operated valve.

   b. Two of each serving without tool needed for complete access, adjustment, and testing of all hydronic systems.

   c. Two manhole access covers for each water control valve for operation of the gate coupling valves shown on the drawings.

6. The irrigation contractor is responsible for the installation of irrigation systems to be a single and electrically wired at each manifold. Coordination of electrical work with other trades is required. All electrical work shall be completed or be capable of being installed or repaired by irrigation contractor.

7. Install all electrical service to the irrigation control system in accordance with the National Electric Code and all applicable local electric codes.

8. When installing pipe systems, the following should be noted:

   a. All pipe systems shall be installed with a minimum of 1" diameter pipe. The use of 1" diameter pipe is recommended for all piping systems. The use of 1 1/2" diameter pipe should be confirmed with the engineer prior to construction.

   b. Install should be cut before you date of underground utilities prior to construction.

   c. Install should be cut before you date of underground utilities prior to construction.

   d. Install should be cut before you date of underground utilities prior to construction.

   e. Install should be cut before you date of underground utilities prior to construction.

   f. Install should be cut before you date of underground utilities prior to construction.

9. Install 1/2" and 1" ductile iron gate control valve assembly for all common water supply system as specified by city of Phoenix representative.

---

**LEGEND**

- **MANUAL VALVE**
- **ELECTRIC VALVE**
- **PRESSURE REGULATOR**
- **GATE VALVE**
- **SLEEVE**
- **UNCONNECTED PIPE CROSSING**
- **ISOLATION VALVE ASSEMBLY**
- **REMOTE CONTROL VALVE ASSEMBLY**
- **PRESSURE REGULATOR & GATE VALVE ASSEMBLY**

**IRRIGATION QUANTITIES**

- **SUB-MANLINE (1" SCH 40 PVC)**: 50 LF
- **DRAIN LATERAL (1" SCH 40 PVC)**: 1,000 LF
- **ELECTRIC GATE VALVE ASSEMBLY (1")**: 2 EA.
- **PRESSURE REGULATOR & GATE VALVE ASSEMBLY**: 2 EA.
- **GATE VALVE (1")**: 1 EA.
- **SLEEVE (4")**: 135 LF

**KEY MAP**

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**IRRGATION SCH & NOTES**

CITY OF PHOENIX, ARIZONA

STREET TRANSPORTATION DEPARTMENT

RIVIERVIEW DRIVE
18th PL TO 22nd ST.
ST955100072

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**STANLEY CONSULTANTS**

ENGINEERING AND ENVIRONMENTAL DESIGN

1818 N. 22nd ST.
PHOENIX, AZ 85006

WWW.STANLEYCON.COM
1. ISOLATION GATE VALVE ASSEMBLY

2. EMMITTER CONTROL VALVE ASSEMBLY

3. FLUSH CAP ASSEMBLY

NOTE:
1. Provide expansion bell at each one connection in valve box (89 mm/3.5" pipe to 1" pipe)
2. Use 3/8" NPS male and 1/2" female pipes for valve and fittings
3. Use 1/2" (15 mm) diameter pipe for valve and fittings
4. Use 1/2" (15 mm) diameter pipe for valve and fittings
5. Valve is subject to non-potable source with capacity in the model

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NOTES:

1. Place emitter at base of footwall on equal side of plant.
2. Refer to planting plan specifications, and plant emitter schedule for planting requirements.

MULTI-PORT EMITTER ASSEMBLY

<table>
<thead>
<tr>
<th>BOTANICAL NAME</th>
<th>FLOW PER OUTLET</th>
<th>QUANTITY AND TYPE OF EMITTER</th>
<th>NUMBER OF OPEN OUTLETS / EMITTERS</th>
<th>TOTAL FLOW/PLANT (GPM)</th>
<th>PLANT (GPM UNLESS SPECIFIED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TREES</td>
<td>1 GPM</td>
<td>1 MULTIPLE OUTLET</td>
<td>1</td>
<td>1</td>
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<tr>
<td>DELTA HALOR</td>
<td>1 GPM</td>
<td>1 MULTIPLE OUTLET</td>
<td>1</td>
<td>1</td>
<td></td>
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<tr>
<td>CHINESE LIMBER</td>
<td>1 GPM</td>
<td>1 MULTIPLE OUTLET</td>
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<td>1</td>
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</tr>
<tr>
<td>PRUNUS ULMATRICA</td>
<td>1 GPM</td>
<td>1 MULTIPLE OUTLET</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ASCENT (DWARF)</td>
<td>1 GPM</td>
<td>1 MULTIPLE OUTLET</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

AGAVE BREVIFLORA
/ E.C. HELENGIVALE FARMERETA
/ LAVANDA GOLD MOUND

NOTES:

1. Total flow requirement per tree assumes daily irrigation cycle of
   four hours during peak season for mature plant material.
### CASE IV - ADJACENT TRAFFIC BARRIER

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Steel List</th>
<th>Service Limit State</th>
<th>Strength Limit State</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### QUANTITIES

- **RI**
  - Square foot area of wall
  - Structural steel
  - 4' x 4' wall
  - 6' x 6' wall
  - 8' x 8' wall
  - 10' x 10' wall
  - 12' x 12' wall

- **C**
  - Concrete
  - 4' x 4' wall
  - 6' x 6' wall
  - 8' x 8' wall
  - 10' x 10' wall
  - 12' x 12' wall

#### LIMIT STATE NOTES

- **RI**
  - Total equivalent uniform vertical bearing stress to be used only in the evaluation of settlement based on the Service Limit State as per AASHTO SP-7.
  - Effective footing width to be used only for the evaluation of settlement based on the Service Limit State as per AASHTO SP-7.

- **C**
  - Total equivalent uniform vertical bearing stress to be used only in the evaluation of bearing resistance based on the Service Limit State as per AASHTO SP-7.
  - Effective footing width to be used only for the evaluation of bearing resistance based on the Service Limit State as per AASHTO SP-7.

- **R**
  - Determined from the procedures in AASHTO SP-7.

- **C**
  - Determined from the procedures in AASHTO SP-7.

#### QUANTITIES NOTE

- Quantities are for information purposes only.
- The pay item is measured in square feet of wall area.
- Quantities are for one LF of wall except for the horizontal steel tap splices and footings.

- Steel quantities for horizontal tap splices shall be noted for segments greater than 30 feet. Add splice for each additional segment greater than 20 feet, horizontal tap splices occur at construction or connection joints.

Steel and concrete quantities for footing shall be added to those shown in the table.

### TYPICAL SECTION (Case IV)

---

**RIVERVIEW DRIVE 18TH PL TO 22ND ST**

**STEPS TO 10072**
GENERAL TRENCHING NOTES

1. ALL WORK TO BE COMPLIES WITH THE APS TRANSMISSION & DISTRIBUTION CONSTRUCTION STANDARDS (T & D) MANUAL. ALL WORK SHALL COMPLY WITH THE NECESSARY PERMIT RESTRICTIONS AND REQUIREMENTS AS PROMULGATED BY THE LOCAL GOVERNMENTAL AGENCY AND / OR OTHER PUBLIC REGULATORY AGENCIES.

2. ALL TRENCHING ACTIVITIES SHALL CONFORM TO O.H.A. REGULATIONS. PROTECT FOR EMPLOYEES AND OTHERS PER O.H.A. REQUIREMENTS SHALL BE PROVIDED ON WORK SITES.

3. DENOTES BADOWK AND CONSTRUCTION PER APS SPECIFICATIONS AS SHOWN IN APPENDIX A. BADING SHOULD BE STRIPPED AND THEN SHOULDERED OR BACKFILL SHALL HAVE 100% COMPLIANCE IN TRAVELED AREAS OR APS COMPLIANCE EASEMENT.

4. MANDATORY 12" VERTICAL SEPARATION BETWEEN ALL APS FACILITIES (I.E. DUCT BAY, CONDUIT, AND CABLE) AND ANY EXISTING UNDERGROUND SERVICES.

5. THE USE OF ALL CONDUIT SYSTEMS MUST BE INSTRUCTED. THE PARTY RESPONSIBLE FOR INSTALLING THE CONDUIT SHALL PROVIDE MANDATORY 12" VERTICAL SEPARATION BETWEEN APS FACILITIES (EXCEPT 4 TO POLES) UNLESS AN APS REPRESENTATIVE IS PRESENT.

6. MANDATORY 12" WEAKENING OF CONDUIT WALL SHALT BE PROVIDED BY APS AND INSTALLED BY THE CONTRACTOR.

7. TRENCH DEPTHS SHOWN ARE MINIMUM REQUIREMENTS.

8. THE TRENCH BOTTOM SHALL BE SLOPED FLAT AND WITHOUT SURFACES. THE TRENCHES SHOWN ON PLANS ARE TO BE BADING OR BACKFILLED. THE BEDDING MATERIAL SHALL BE PROVIDED IN THE REQUIRED SIZE AND THE BEDDING MATERIAL SHALL NOT CONTAIN ROCKS OR GRAVEL LARGER THAN 1-1/2" IN THEIR GREATEST DIMENSION. THE BEDDING MATERIAL MUST BE OF A SUITABLE VOLUME TO FILL ALL Voids.

9. CONTRACTOR SHALL NOT TRENCH CLOSER THAN 2' TO APS FACILITIES (EXCEPT 4 TO POLES) UNLESS AN APS REPRESENTATIVE IS PRESENT.

10. WHEN PASSING OVER OR UNDER CONFLICTS, TRENCH SHALL NOT BE SLOPED FLAT AND WITHOUT SURFACES. THE TRENCH SHALL BE AT LEAST 1/2' DEEPER THAN THE LOWEST CONFLICT INTERFACE OR A MINIMUM OF 18 INCHES IN WIDTH WHEREVER A WORKER MUST ENTER THE TRENCH, THE TRENCH SHALL BE AT LEAST 1/2' DEEPER THAN THE LOWEST CONFLICT INTERFACE OR A MINIMUM OF 18 INCHES IN WIDTH WHEREVER A WORKER MUST ENTER THE TRENCH.

11. TRENCH WIDTH SHOWN ARE MINIMUM REQUIREMENTS BASED ON CONDUIT SIZES. TRENCHES 46 INCHES OR MORE IN DEPTH. MEASURED TO TOP OF TRENCHED BEDDING MATERIAL, ARE TO BE MAINTAINED AT A MINIMUM OF 16 INCHES IN WIDTH WHEREEVER A WORKER MUST ENTER THE TRENCH. TRENCHES 46 INCHES OR MORE IN DEPTH, MEASURED TO TOP OF TRENCHED BEDDING MATERIAL, ARE TO BE MAINTAINED AT A MINIMUM OF 24 INCHES IN WIDTH WHEREVER A TRENCH MIGHT BE SHORED FOR TRENCH DEPTHS REQUIREMENTS ARE ADDED TO THE APPROACH DISTANCE. ALL APS POLES AND MOUNTED EQUIPMENT AND SUBSTRUCTURES, THESE MINIMUMS ARE REQUIRED TO BE SHORED IN A MANNER THAT ENABLES APS FACILITIES TO BE SECURED IN ADDITION TO THE SHORED MATERIAL. ALL APS CONDUIT SHEETS SHALL NOT BE CUT-OFF FOR FACILITATE INSTALLATION.

12. REFER TO W-24 FOR MINIMUM TRENCH DEPTHS REQUIREMENTS AT THE APPROACH TO AND BENEATH A P.S. POLES AND MOUNTED EQUIPMENT AND SUBSTRUCTURES, THESE MINIMUMS ARE REQUIRED TO BE SHORED IN A MANNER THAT ENABLES APS FACILITIES TO BE SECURED IN ADDITION TO THE SHORED MATERIAL. ALL APS CONDUIT SHEETS SHALL NOT BE CUT-OFF FOR FACILITATE INSTALLATION.

13. THE TRENCHING CONTRACTOR IS REQUIRED TO PROVIDE A TRENCH CONTROL PLAN (T.C.P.) PRIOR TO APS INSTALLING A TRENCHING PERMIT.

14. SPACING BETWEEN APS LAYERS IS 5" MINIMUM WHEN MECHANICAL COMPACTION IS USED. OTHERWISE, IT CAN BE DECREASED TO 3'.