The project consists of adding northbound left turn lanes on Houghton Road at the intersections of Andrada Road and at Camino del Emperador. Intersection improvements include grading, paved travel lanes and paved shoulders, header curb, striping and signing and erosion control.
1. **CRACK SEAL ANTICIPATION:** This work consists of furnishing and placing crack seal materials, including crack seal, in the form of a spray or pourable material, or any other material as specified, in order to provide improved sealant performance. The sealant shall be applied to the cracks before placing the specified concrete or asphalt mixture.

2. **MATERIALS:** The crack seal material shall be furnished and placed as specified, and shall be of a quality suitable for the service to which it is subjected. The crack seal material shall be compatible with asphalt concrete and shall not cause any adverse effects on the surrounding material.

3. **APPLICATION:** The crack seal material shall be applied to the cracks before placing the specified concrete or asphalt mixture. The application shall be done in accordance with the manufacturer's instructions.

4. **QUALITY:** The crack seal material shall be of a quality suitable for the service to which it is subjected. The crack seal material shall be compatible with asphalt concrete and shall not cause any adverse effects on the surrounding material.

5. **SAFETY EDGE DETAIL:** The safety edge detail shown on the plans shall be installed as specified. The safety edge shall be installed in accordance with the manufacturer's instructions.

6. **DESIGN DATA:**

   **HOUGHTON ROAD**

   - **ADT:** 11,176 VPD
   - **Design Speed:** 55 MPH
   - **Classification:** Rural Principle Arterial

---

**SECTION NO. 1**

- **Houghton Road**
- **Travel Lanes and Paved Shoulders**
  - **Subgrade:**
    - **Horizontal:** 6" AB
    - **Vertical:** 6" AB
  - **Tack Coat**
  - **Chip Seal**

---

**SECTION NO. 2**

- **Houghton Road**
- **Unpaved Shoulders**
  - **Subgrade:**
    - **Horizontal:** 2" AB
    - **Vertical:** 2" AB
  - **Fog Coat**
  - **Existing AC**

---

**SECTION NO. 3**

- **Driveways & Houghton Road**
- **Unpaved Shoulders**
  - **Subgrade:**
    - **Horizontal:** 4" AB
    - **Vertical:** 4" AB
  - **Fog Coat**
  - **2 1/2" PAG AC (No.2)**

---

**SECTION NO. 4**

- **Houghton Road**
- **Andrada Road**
  - **Subgrade:**
    - **Horizontal:** 4" AB
    - **Vertical:** 4" AB
  - **Existing AC**
  - **Fog Coat**
  - **Chip Seal**
  - **2 1/2" PAG AC (No.2)**

---

**SECTION NO. 5**

- **Camino Del Emperador**
  - **Subgrade:**
    - **Horizontal:** 4" AB
    - **Vertical:** 4" AB
  - **Fog Coat**
  - **2 1/2" PAG AC (No.2)**

---

**SAFETY EDGE DETAIL**

- **Houghton Road**
- **Safety Mgmt**
- **Design Files**
- **Typical Sections**

---

**NOTES:**

1. **CRACK SEAL MATERIAls:** The contractor shall submit the materials, material samples, and material test data to the owner for approval prior to use. Materials may be tested in the field and the results shall be communicated to the owner.

2. **APPLICATION:** The crack seal material shall be applied in accordance with the manufacturer's instructions.

3. **QUALITY:** The crack seal material shall be of a quality suitable for the service to which it is subjected. The crack seal material shall be compatible with asphalt concrete and shall not cause any adverse effects on the surrounding material.

---

** sheets of 50 sheets per file.
INTERSECTION IMPROVEMENTS AT ANDRADA RD AND CMO DEL EMPERADOR HOUGHTON ROAD ROADWAY PLANS
INTERSECTION IMPROVEMENTS
AT ANDRADA RD AND CMO DEL EMPERADOR
HOUGHTON ROAD
ROADWAY PLANS
CONCRETE HEADER DETAIL

8" x 12" Concrete Header (Class B Concrete)

GROUTED RIP-RAP DETAIL

8" x 12" Concrete Header (Class B Concrete)

PROFILE GRADE - CAMINO DEL EMPERADOR

Scale: H. 1"=40' V. 1"=4'

Existing Ground
### PAVEMENT MARKING QUANTITIES-SHEET PM2 TO PM3

<table>
<thead>
<tr>
<th>BID ITEM</th>
<th>ITEM</th>
<th>UNIT</th>
<th>QUANTITY</th>
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<td>L.F.</td>
<td>16200</td>
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</table>

**PAVEMENT MARKING GENERAL NOTES**

The following notes shall appear on all pavement marking plans and are included here for the user's reference:

1. **All Equipment/Materials and Construction shall be in accordance with the latest issue of the AASHTO Roadway交marking Manual, for public improvements. The specifications and the standards, all pavement markings shall be installed in accordance with the PC/OT Pavement Marking Design Manual and applicable amendments.**

2. **The Final Contractor shall submit to the Pima County Pavement Marking Superintendent (3-7-744-7-74) at least 3 working days in advance of any Pavement Marking work being installed to schedule inspection and approval of Pavement Marking during normal business hours Monday through Friday, holidays excluded.**

3. **Upon approval of the Pavement Marking Layout, the Final Contractor Pavement Marking Superintendent will issue written authorization to the contractor to proceed with installing all Pavement Markings and associated reflective Pavement Markings.**

4. **The Permanent Pavement Markings may be modified as directed and approved by the Traffic Engineer or their designee.**

5. **The Design Speed for Houghton Road is 55 mph. The Design Vehicle is H-8-0-2. The posted speed limit is 50 mph.**

6. **All Land Dimensions are measured from the center of lane line, center of double lane line, or edge of pavement unless otherwise noted.**

7. **The Pavement Marking layouts are subject to the contractor to follow all guidelines, applicable, engineering details, and specified Pima County standards when installing Pavement Marking, symbols, legends, and markers.**

8. **Painted Layout shall be 15 mil (0.015) thick, water-based paint placed on the final pavement surface with 6 pounds per gallon of asphalt. A 2-1/2" wide line shall be used.**

9. **Painted Layout shall be applied within the same day as the painted stripes. With the exception of free lane symbols and markers for yellow, white, only.**

10. **The final longitudinal marking shall be 80 mil (0.080) thick, rigid concentric thermoplastic longitudinals, spaced one on each layout striping with a single coat of 5 pounds per 100 square feet of asphalt. Note 3.5.3.3. Plan 1. The final longitudinal marking shall be placed the longest linear distance on the final pavement surface being completed. All previously painted longitudinal markings shall be applied during the final longitudinal striping.**

11. **All final transverse striping, excluding symbols and legends shall be 50 mil (0.050) hot asphalt, cart wetted thermostatic with 10 pounds per 100 square feet of asphalt. Note 3.5.3.3. Plan 1.**

12. **The contractor shall be responsible for the layout and installation of Pavement Markings on the final surface course. The control line is perpendicular to the direction of travel except for control points that have been set no more than 30 feet apart on a curve section and 200 feet apart in tangent sections where the pavement marking pattern changes.**

13. **It is the contractor's responsibility to ensure that the final surface course is placed so that the construction joint is no more than one foot from the final striping.**

14. **All retroreflective based pavement markers ( Kıraç 7-10) shall be installed so that the reflective face of each marker is facing the direction of traffic and is perpendicular to the direction of traffic flow.**

15. **Pavement Markers shall be installed so that the reflective face is perpendicular to the direction of traffic.**

16. **Pavement Markers shall be installed per the current edition of the PC/OT Pavement Marking Manual and applicable amendments.**

17. **All removal of existing Pavement Markings shall be accomplished in accordance with Section 707 of the PC/OT Pavement Marking Manual. Painting over existing striping does not constitute approved striping deletion.**

18. **For Pima County Pavement Marking Projects, the tax consultant/project manager shall be required to produce as-built striping plans within 30 days of striping completion.**

19. **Unless otherwise noted, all Pavement Markings shall be installed by the Contractor.**

20. **Upon final inspection, a written acceptance or refusal of the work or workmanship shall be submitted to the Contract and Pima County by the Traffic Engineer or authorized representative.**

21. **The Contractor shall be responsible for maintaining all striping until project is considered complete for the applicable pavement marking. Pima County (fully open to traffic). All punchlist items are completed, except any long term maintenance items. If the pavement marking material is no longer available, the contractor shall transfer that warranty to Pima County.**

22. **The PC/OT Pavement Marking Manual is available online.**
SIGNING GENERAL NOTES:

THE FOLLOWING NOTES SHALL APPEAR ON ALL TRAFFIC SIGNAL PLANS AND ARE INCLUDED HERE FOR THE USER'S REFERENCE:

1. ALL EQUIPMENT, MATERIALS AND CONSTRUCTION SHALL MEET OR EXCEED THE REQUIREMENTS CONTAINED IN THE CURRENT PIMA ASSOCIATION OF GOVERNMENTS (PAG) STANDARD SPECIFICATIONS AND THE STANDARD DETAILS FOR PUBLIC IMPROVEMENTS, THE SPECIAL PROVISIONS AND THE APPROVED PLANS.

2. ALL SIGNS SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE LATEST EDITION OF THE PIMA COUNTY/CITY OF TUCSON TRAFFIC SIGNING DESIGN MANUAL, THESE PLANS, THE SPECIAL PROVISIONS AND APPLICABLE AMENDMENTS.

3. SIGNS MAY BE MOVED AND LOCATIONS ADJUSTED TO FIT CONDITIONS AT THE DISCRETION OF THE TRAFFIC ENGINEER.

4. THE DESIGN SPEED FOR HOUGHTON ROAD IS 55 MPH, THE POSTED SPEED LIMIT IS 50 MPH. SIGN PLACEMENT SHALL BE BASED ON THE POSTED SPEED LIMIT.

5. POST LENGTHS INDICATED ON SIGN SUMMARY SHEETS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ACTUAL POST LENGTHS.

6. ALL PERFORATED POSTS SHALL BE INSTALLED IN A CONCRETE FOUNDATION, UNLESS OTHERWISE DIRECTED BY THE TRAFFIC ENGINEER.

7. ALL SIGN STATION LOCATIONS ARE APPROXIMATE, THE CONTRACTOR SHALL VERIFY ACTUAL SIGN LOCATIONS WITH THE TRAFFIC ENGINEER PRIOR TO THE INSTALLATION OF ANY SIGNS.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH BLUE STAKE FOR INSTALLING ALL TRAFFIC SIGNS IN THE FIELD AND FOR MAINTAINING ALL SIGNS UNTIL PROJECT IS APPROVED FOR CONSTRUCTION ACCEPTANCE BY PIMA COUNTY (FULLY OPEN TO TRAFFIC, ALL PUNCH LIST ITEMS ARE COMPLETED, AND ONE YEAR WARRANTIES BEGIN).

9. ALL OVERHEAD MOUNTED SIGNS SHALL BE DIAMOND GRADE SHEETING, TYPE XI. ALL SCHOOL SIGNS SHALL BE FLORESCENT YELLOW/GREEN DIAMOND GRADE SHEETING, TYPE XI. ALL OTHER SIGNS SHALL BE HIGH INTENSITY PRISMATIC SHEETING, TYPE IV. ALL GROUND MOUNTED SIGNS SHALL HAVE AN ANTI GRAFFITI COATING APPLIED TO SIGN FACE, 3M #1160 FILM OR EQUIVALENT.

10. ALL NEW SIGNS SHALL HAVE 0.080 GAUGE, RADIUS CORNER, ALUMINUM BACKING UNLESS OTHERWISE NOTED.

11. PRIOR TO DISTURBING ANY TRAFFIC SIGNS, A SIGN CONDITION INVENTORY OF ALL EXISTING SIGNING SHALL BE CONDUCTED BY THE CONTRACTOR AND PROVIDED TO THE SIGN SHOP SUPERVISOR (520-724-2611). INVENTORY SHALL INDICATE CURRENT SIGN LOCATION AND CONDITION, INCLUDING ANY EXISTING DAMAGE OR DEFICIENCIES.

12. ANY SIGNS AND POSTS BEING RE-USED ON THIS PROJECT SHALL BE STOCKPILED IN A MANNER TO AVOID DAMAGE AND MAINTAIN THE INTEGRITY OF THE SIGNS. SAFE STORAGE OF STOCKPILE AND PAYMENT FOR DAMAGE TO THE STOCKPILE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

13. ALL SIGNS AND POSTS NOT BEING RE-USED ON THIS PROJECT SHALL BE DISMANTLED, STACKED AND DELIVERED TO THE OWNER (CITY OR COUNTY). THE CONTRACTOR IS RESPONSIBLE FOR THE SAFE STORAGE AT THE CONSTRUCTION SITE UNTIL DELIVERY, AND THE SAFE UNLOADING OF THE SALVAGED MATERIAL. NOTIFICATION OF DELIVERY SHALL BE MADE AT LEAST TWO WORKING DAYS (48 HOURS) PRIOR TO DELIVERY. PIMA COUNTY SIGN SHOP, 1313 S. MISION ROAD (520-724-2367), NO FRIDAY DELIVERIES.

SIGNING QUANTITIES:

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<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
<th>UNIT</th>
<th>QUANTITY</th>
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<td>Removal of Signs and Stickers</td>
<td>EA#6</td>
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<tr>
<td>20102020</td>
<td>Relocate Signs</td>
<td>EA#6</td>
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<tr>
<td>20102020</td>
<td>Install New Permanent Sign</td>
<td>EA#6</td>
<td>10</td>
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<tr>
<td>20102020</td>
<td>Paint New Sign Post (Permanent)</td>
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<tr>
<td>20102020</td>
<td>Paint New Traffic Control (Permanent) Type XE</td>
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</table>

SIGNING GENERAL NOTES:
INTERSECTION IMPROVEMENTS
AT ANDRADA RD AND CMO DEL EMPERADOR
HOUGHTON ROAD
SIGNING PLANS
ONLY
CATTLE
GUARD
STOP
Houghton Rd
800N Rd
Cm Del Emperador
NO
PIMA CO.
PROPERTY
TRESPASSING
INTERSECTION IMPROVEMENTS
AT ANDRADA RD AND CMO DEL EMPERADOR
HOUGHTON ROAD
SIGNING PLANS
INTERSECTION IMPROVEMENTS AT ANDRADA RD AND CMO DEL EMPERADOR
HOUGHTON ROAD SIGNING PLANS
GENERAL NOTES:
1. Areas outside of the Project Disturbance Limits or Right of Way shall remain undisturbed. Should additional area require disturbance, the Engineer, Owner and appropriate parties must be notified. Any project related activities or disturbance beyond the Project Disturbance Limits or Right of Way will require historic and cultural resources compliance to have been included before any disturbance can occur. The Plans and NOI must be updated accordingly and reflect additional BMPs.

2. All disturbed soils shall be stabilized. Apply seed mix to disturbed soils.

3. Seeding limits shown on plans are estimated on anticipated limits of soil disturbance. Seeding will be field adjusted to match limits of soil disturbance.

4. All Erosion Control Measures shall be installed within 14 days of establishing rough grade. Disturbed areas where construction is delayed for more than 14 days require Temporary Erosion Control Measures.

5. Erosion Control Measures shall be installed at perimeter of Limits of Disurbance, as shown on plans.

6. Sediment Control Measures shall be installed on all side slope boundaries. Sediment controls shall be placed on side slope boundaries when adjacent side slope is at lower elevation than project area with potential to receive stormwater runoff. Adjacent slopes at higher elevation than project area do not require perimeter control.

7. Sediment Wattles shall be installed on slopes, per Erosion & Pollution Control plans, and per Detail E1. Ends of Wattles shall be turned upslope at a 45 degree angle, 3’ min., Typ.

8. Contractor shall determine final location of Stabilized Construction Entrance/Exit Gravel Pad according to site conditions and/or construction sequencing, with approval from the Engineer. Use of other access points must be approved by the Engineer.

9. Sweeping and/or vacuuming may be required as a secondary measure if trackout is visible.

10. Containment Areas shall be identified on Contractor’s Stormwater Pollution Prevention Plan.

11. Spill response equipment shall be accessible in case of a spill, and located within/near the Containment Area.

12. Quantities shown in Summary of Quantities are for Contractor convenience. Contractor to verify all quantities.

13. All work and materials relating to the BMPs detailed within these Plans (including all materials used for BMPs, all ground preparation, furnishing, installing, maintenance, final removal, and disposal of temporary BMPs, as well as returning the area to an acceptable condition as approved by the Engineer) shall be paid for under the Erosion and Pollution Control bid items.

GENERAL NOTES (CONTINUED):
14. The work covered by this section shall also include the preparation of soil with areas to be seeded, the hydroseeding of disturbed area with native plants (Class II), and the installation of a temporary, degradable erosion control blanket in areas designated on the project plans.

15. Seed mix species and the Pure Live Seed (PLS) will be as shown on the Sheet EC02.

16. The seed is to be obtained from seed suppliers through listing of wildland collections, or field-grown seeds grown prior to or during the contract period.

17. Weed content of the contract-specified seed mix is not exceed 0.5 percent.

18. Seed is to be stored under dry conditions, at temperatures of between 35°F and 120°F, and out of direct sunlight. Seed that has become moldy, wet, or otherwise damaged, will not be acceptable. Seed shall be labeled for in pounds of pure, live seed (PLS) where PLS is defined as the product of seed germination (G) and seed purity (P) all divided by 100.

19. Upon completion of the hydroseeding operations, erosion control blankets shall only be installed over those seeded areas that are indicated on the landscape plans to receive erosion control blanket. The blanket shall be installed as detailed on the project plans and per the manufacturer’s written instructions and recommendations. The blanket shall be installed as soon as possible after seeding. The Contractor shall be responsible for reseeding any seeded areas disturbed by the installation of the blanket or that area eroded prior to the installation of the blanket.

20. The initial application for Seeding (Class II) will be measured either by the square yard of ground surface, to the nearest 100 square yards seeded, or by the acre to the nearest 0.1 acre, complete-in-place. The second application for Seeding (Class II) will be measured either by the square yard of ground surface, to the nearest 100 square yards seeded, or by the acre to the nearest 0.1 acre, complete-in-place.

21. Accepted quantities of seeding, measured as provided above, will be paid for at the contract unit price indicated in the Bid Schedule and will be compensated as compensation, in full, for the item complete in place, including all labor, equipment materials, tools, supplies and incidentals necessary for the work in conformance with the requirements herein; the project plans or as may be directed by the Engineer. Price given is per bid quantity per Subsections 108-3 and 108-4 of the Standard Specifications do not apply to work under this item.

22. No direct measurement or payment will be made for the preparation or the preservation of seeding areas, the cost being considered as included in the cost of the contract item.

23. When multiple mobilizations are required to accomplish seeding as specified herein, the cost will be included in the price bid for the seeding. No adjustments will be made to the contract for the number of seeding mobilization activities. Should the contractor fail to perform seeding for a sub-area as specified herein, the Engineer will immediately notify the contractor of such non-compliance. Should the contractor fail to immediately remedy the situation, the Engineer may suspend work until such seeding stabilization has been completed, or proceed to provide the necessary seeding stabilization. The entire cost of such work will be deducted from the monies due to the contractor. In addition, no adjustment to the contract time will be made for suspensions resulting from the contractor’s failure to provide seeding for a sub-area within the time periods specified herein.
EROSION AND POLLUTION CONTROL BMP
SUMMARY OF QUANTITIES

<table>
<thead>
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<th>UNIT</th>
<th>QTY</th>
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SEED MIX 1 - (CLASS II) TYPE A, LOW GROW SEED-MIX
SCHEDULE FOR ROADSIDE AREAS - CLEAR ZONE

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<thead>
<tr>
<th>BOTANICAL NAME</th>
<th>COMMON NAME</th>
<th>PL S LBS. / ACRE</th>
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</thead>
<tbody>
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<td>Needle Grama</td>
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<td>Bouteloua gracilis “Hatchla”</td>
<td>“Hatchla” Blue Grama</td>
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<td>Zinnia acerosa</td>
<td>Desert Zinna</td>
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</table>
INTERSECTION IMPROVEMENTS
AT ANDRADA RD AND CMO DEL EMPERADOR
HOUGHTON ROAD

WATTLE SPACING INTERVALS

<table>
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<tr>
<th>Slope Ratio (H:V)</th>
<th>Maximum Spacing Interval</th>
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</thead>
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<tr>
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</tr>
<tr>
<td>4:1</td>
<td>30'</td>
</tr>
<tr>
<td>5:1</td>
<td>40'</td>
</tr>
</tbody>
</table>

*Notes:
1) Top row shall not be placed within 6'-0" of edge of pavement and 3'-0" from outside surface of barrier.
2) For erosive soils, place rows of wattles closer together.
3) For soils with low erosive potential, place rows of wattles further apart.

SECTION (NTS)

Stake Length:
24' for 3'-0" Diag Wattle
33' for 20'-0" Diag Wattle

SEDIMENT WATTLE STAKING DETAIL (NTS)

SEDIMENT WATTLE LAYOUT (NTS)

SEDIMENT WATTLE OVERLAP (NTS)

NOTES:
1. Install Sediment Wattles as slopes are constructed to grade or as directed by the Engineer. Select, install and maintain in conformance with manufacturer's specifications to meet site conditions for slope protection and in accordance with good engineering practices.
2. Sediment Wattles shall be in continuous contact with trench bottom and sides. Do not overlap wattle ends on top of each other. A 20'-0" wattle may be made from 2-3 rolled excelsior or straw blankets.
3. Butt adjoining wattles tightly against each other. Drive the first stake of the second wattle at an angle toward the first wattle to help abut them tightly.
4. Repair any holes or gullies promptly. Make field adjustments and corrections of wattle BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
5. For seeded areas, wattles shall be placed to form minor ridges and furrows parallel to new slope contours and as specified in Section 800 of the Project Specifications.
6. Divert and direct run-on water from outside of the slopes to the spillways and/or rock riprap/rock mulch. Diversion dikes and/or ditches are necessary on natural undisturbed slopes beyond the top limits of new slopes to divert run-on water.
7. Installation and maintenance of Sediment Wattle BMPs shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities.
8. Install and maintain Sediment Wattle BMPs to carry the stormwater of at least 2-year, 24-hour events.
9. Refer to Project Specification Section 810 for Sediment Wattle material specifications.
10. Make field adjustments and corrections to ensure NO sensitive biological resources (native species / habitats) will be adversely impacted.
**NOTES:**
1. Locate Sediment Logs as indicated in plans, SWPPP, or as directed by the Engineer.
2. Select, install and maintain Logs per manufacturers' specifications and good engineering practices.
3. Lay Sediment Log across prepared roadway ditch or channel. Trenching or burial of Sediment Logs is not required. Place continuous contact between the bottom of the Log and the ground is mandatory. The Logs shall be installed in the roadway ditch, swale or channel bottom perpendicular to the flow of water as shown on detail this sheet.
4. Stake Log as shown. Stakes shall be placed through downstream side only as shown.
5. DO NOT drive stakes through center of the Log. Stakes must be driven into the ground as shown.
6. Ensure that no gaps exist between soil and bottom of Sediment Log. Repair any rills or undercuts promptly.
7. Placement of Sediment Logs shall be evaluated by the Engineer in rocky soil conditions.
8. Remove Sediment Log BMPs within the ditches/ channels as per the direction of the Engineer or as soon as practical upon stabilization of the construction disturbed area.
9. Dispose of Sediment Logs and trapped sediment material and fill trench created by Sediment Log.
10. The installation and maintenance of Sediment Log BMPs shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities. Sediment Logs shall be installed and maintained to carry the stormwater of at least 2-year, 24-hour events.
11. Make field adjustments and corrections of Sediment Log BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
12. Rock mulch/rip rap may be required for channel/ditch lining or rock check dams for longitudinal ditch slopes that exceed 5% and/or for soil conditions not suitable for Log installation.
13. The Sediment Log BMP's pay/hld item shall include all materials used for this BMP; all ground preparation, furnishing, installing, maintenance, final removal, and disposal, as well as returning the area to an acceptable condition as approved by the Engineer.
14. Refer to Standard Specification Section 810-2.06(E) for Sediment Log material specifications.
15. Make field adjustments and corrections to ensure no sensitive biological resources (native species / habitats) will be adversely impacted.
16. Construct Rock Wedge with angular-shaped Gradation C Rock Mulch as defined in Section 810-2.03 of the Standard Specifications and those special provisions. Natural river-run materials such as rounded river rocks/cobblestones and pebbles are NOT acceptable.

**VERTICAL SCALE: 1" = 1' 0" (Min) to Edge of Pavement**

**SECTION A-A (NTS)**

- **1"x3"x46" Hardwood Stake (Typ)**
- **A**
- **Estimated High Flow Line**
- **Fractured / Crushed Angular Rock Mulch Wedge (approx. 12 wide x 5' high) to be Applied Against Both Upstream and Downstream Sides of Sediment Log to Prevent Undermining.**
- **Rock Wedge Shall Be Gradation C As Per Section 810-2.03 of the Standard Specifications.**

**DETAIL E2:**

**SEDIMENT LOG**

- **Flow**
- **Sediment Log**
- **Tight, No Gaps Between Logs**
- **Typical Overlap Plan (NTS)**
- **Flow**
- **6'-0" (Min) to Edge of Pavement**
- **2'-0" (Typ.)**
- **Drafted by: S. Wilson**
- **12/2017**
- **2018 03:04 PM**
NOTES:
1. Install Stabilized Construction Entrance/Exit Gravel Pad BMP for traffic entering or exiting a construction site where sedimentation, clay, silt or other pollutants can be tracked onto public roads and/or adjacent water bodies, as approved by the Engineer. It may also be applied for construction entrance/exit wind erosion/dust control, as approved by the Engineer.
2. Locate new Construction Entrance(s)/Exit(s) at appropriate project entrance/exit points as determined in field with the approval of the Engineer. Relocate Stabilized Construction Entrance/Exit Gravel Pad BMP as needed as project progresses. Replace Rip Rap materials in drive paths when dirt or mud accumulates.
3. Rip Rap materials shall be fractured/crushed rocks in angular shape as defined in Section 810 of the Project Specifications. Natural river-run materials, especially rounded natural river rocks, are not acceptable.
4. Field adjust and correct Construction Entrance/Exit Rip Rap Pad BMP immediately if it is causing flooding and/or affecting roadway safety.
NOTES:
1. Refer to EC01 for Quantities and General Notes.
2. Refer to Roadway Plans for Additional Information.
3. No Drywells in Vicinity.

INTERSECTION IMPROVEMENTS
AT ANDRADA RD AND CMO DEL EMPERADOR
HOUGHTON ROAD

EROSION AND POLLUTION CONTROL BMP SCHEDULE

LEGEND

NOTES:
1. Refer to EC01, for Quantities and General Notes.
2. Refer to Roadway Plans for Additional Information.
3. No Drywells in Vicinity.

PIMA COUNTY DEPARTMENT OF TRANSPORTATION

Sheet EC06 of EC07
Page 25 of 26
NOTES:
1. Refer to EC01 for Quantities and General Notes.
2. Refer to Roadway Plans for Additional Information.
3. No Drywells in Vicinity.