INFORMATION HANDOUT

For Contract No. 11-413604
At 11-Imp-8-R45.5/R55.0

Identified by
Project ID 1113000036

MATERIALS INFORMATION

1. Water source information, Imperial Irrigation District Water Department, dated February 4, 2015
2. Structural Sections/Pavement Rehabilitation Recommendations-Revision, dated November 13, 2014
3. Corrosion Study, dated January 29, 2015
4. Ramp Pavement Rehabilitation Recommendations-Revision, dated March 12, 2015

IID

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February 4, 2015

Mr. Sam Amen
Imperial Valley Project Manager
California Department of Transportation
4050 Taylor Street, MS 120
San Diego, CA 92110

Subject: Request for Construction Water Service – Interstate 8 Continuous Reinforced Concrete Pavement Project

Dear Mr. Amen:

The Imperial Irrigation District is in receipt of your request dated January 27, 2015 for construction water service for the Imperial County – Interstate 8 Continuous Reinforced Concrete Pavement Project for certain project areas identified on your map (attached).

According to the terms of IID's 1932 federal water contract, only lands that are within the All-American Canal service area boundary that have been included within the legal boundary of IID are eligible to receive water. Lands outside of the AAC service area boundary can receive water from IID only if IID agrees to sell or lease conserved water pursuant to a water conservation and transfer agreement. While these supplies are subject to even more constraints and approvals under the terms of the Quantification Settlement Agreement and various other related contracts, IID's Board of Directors is on record as indicating they are not in favor of any additional or new water transfers, which in and of themselves are complicated and tied to other existing contractual obligations.

Based on a review of your project locations, only the most westerly site, shown in green on your map and beginning at I-8 postmile R45.5, is within the legal boundary of IID's water service area and eligible to receive water service. The remaining two project locations are not included and thus ineligible to receive IID water service. Requests for temporary service for the westerly project can be made at the IID Southend Division office (or contact Paul Lopez at 760-427-2361) and are subject to all IID rules and regulations as well as the requirements associated with the temporary encroachment permit your project will need as a condition of service. This includes, but is not limited to, metering and operational approval of the specific withdrawal location(s).

For future reference, a general map of the IID service area can be accessed from IID's website at http://www.iid.com/Modules/ShowDocument.aspx?documentid=4680. While all specific project inquires should be directed to IID, a quick rule of thumb is that projects within the Imperial Unit (designated by the darker green area/hash marks on this map) are usually eligible to receive water. All new projects requiring water service from IID should, however, contact the Water Department directly to discuss water availability and service issues, so I do appreciate your inquiry. If you have any questions, please feel free to contact Autumn Plourd at (760) 339-9755.

Sincerely,

Tina Shields

Tina Anderholt Shields, P.E.
Interim Water Department Manager

TAS/ceb
Enclosure
cc: Water Engineering
Mr. Paul Lopez, Southend Division Office
Ms. Autumn Plourd

WATER USE ESTIMATE

Project Information

Contract Number	EA413601
Project Identifier Number	1113000036
County/Route/PM	Imp/8/R45.5 - R55.0

Estimate Prepared By

Dylan Moore

Estimate Date and Time: **4/28/2015 8:24**

Base Rates Used For Calculating Estimated Required Water

Bid Item / Work Activity	Base Rates	Unit of Measure
Roadway Excavation (Embankment)	30	Gal/CY
Aggregate Base & Subbase	15	Gal/CY
Dust Control	2	Gal/SQYD/Day
Subgrade Compaction	10	Gal/SQYD
Hot Mix Asphalt Compaction	7	Gal/Ton
Concrete	25	Gal/CY
Cold Planning Pavement	0.5	Gal/SQYD
Grind Concrete Pavement	6.5	Gal/SQYD
Groove Concrete Pavement	1.5	Gal/SQYD

Estimated Water Required for Bid Item / Work Activity

Bid Item / Work Activity	Estimated Quantity	Quantity Unit of Measure	Estimated Water Required (Gallons)
Roadway Excavation (Embankment)	243000	CY	7,290,000
Aggregate Base & Subbase	45,000	CY	675,000
Dust Control Area		SQYD	
Dust Control Days		days	0
Subgrade Compaction		SQYD	0
Hot Mix Asphalt Compaction	117,000	Ton	819,000
Concrete	129000	CY	3,225,000
Cold Planning Pavement	77000	SQYD	38,500
Grind Concrete Pavement		SQYD	0
Groove Concrete Pavement		SQYD	0

Note: Include only concrete that could be produced at a portable plant on the projects site.

Project Estimated Total Water Required	Unit of Measure
12,047,500	Gallons
1,610,517	CF
45,605	M^3
36.97	Acre-foot

State of California

Business, Transportation and Housing Agency

Memorandum

To : NICOLA BERNARD (MS 340)
Project Manager
Design

Date: November 13, 2014

File: 11-IMP-8
PM R45.5/R55.0
EA 11-413601
EFIS 1113000036

From : **DEPARTMENT OF TRANSPORTATION - DISTRICT 11**
PAVEMENT ENGINEERING SECTION

Subject: **STRUCTURAL SECTIONS / PAVEMENT REHABILITATION RECOMMENDATIONS-Revision**

This Addendum revises the 4th Main Lane Structural Section Alternative due to updated 40 Yr TIs furnished November 5, 2014 by the District Traffic Forecasting Branch and summarizes the previous ramp and detour recommendations. The revised alternative removes the existing PCCP, CTB, and a portion of the AB. These layers are replaced with CRCP and HMA-A leaving the rest of the AB-Class 2 and AS-Class 4 in place to achieve a 0.0' increase in the profile grade.

The structural sections furnished meet or exceed the minimum requirements in the current Highway Design Manual, Section 600, updated November 2, 2012, and Rigid Pavement Catalog Table 623.1i.

The 20 and 40 year Traffic Indices (TI) were provided by the District Traffic Forecasting Branch on November 5, 2014.

The 40 yr TI changes at PM R47.7 from 14.5 to 14.0.

The rigid pavement design is based upon Continuously Reinforced Concrete Pavement (CRCP) with lateral support.

MAIN LANE STRUCTURAL SECTION ALTERNATE 4 (revised)

IMP-8 (PM R45.5/R47.7) CRCP Traveled Way (40 yr TI = 14.5, R-value = 10)

Remove the existing PCC, CTB and 0.05' AB pavement layers, leaving in place the remainder of the existing AB-Class 2 base and AS-Class 4 subbase layers.

The new CRCP and HMA-A pavement layers will be constructed over the existing base and subbase layers. This eliminates the new AB-Class 2 layer.

This alternative will have a 0.0' net increase to the main lane TW profile grade.

Existing TW:

0.70' PCC (Remove)
0.45' CTB (Remove)
0.25' AB-Class 2 (Remove 0.05', Leave 0.20' in place)
0.50' AS-Class 4 (Leave in place)

Proposed new CRCP TW:

0.95' CRCP
0.25' HMA-A
0.20' AB-Class 2 (portion of existing to remain in place)
0.50' AS–Class 4 (existing to remain in place)

IMP-8 (PM R45.5/R47.7) Shoulder

Existing Shoulder:

0.30' AC (Remove)
0.85'-1.10' AB-Class 2 (Remove)
0.50' AS-Class 4 (Remove 0.05'-0.30')

Proposed new CRCP Shoulder:

0.95' CRCP
0.25' HMA-A
0.25' AB–Class 2
0.20'-0.45' AS-Class 4 (portion of existing to remain in place)

IMP-8 (PM R47.7/R55.0) CRCP Traveled Way (40 yr TI = 14.0, R-value = 10)

Remove the existing PCC, CTB pavement layers, leaving in place the existing AB-Class 2 base and AS-Class 4 subbase layers.

The new CRCP and HMA-A pavement layers will be constructed over the existing base and subbase layers. This eliminates the new AB-Class 2 layer.

This alternative will have a 0.0' net increase to the main lane TW profile grade.

Existing TW:

0.70' PCC (Remove)
0.45' CTB (Remove)
0.25' AB-Class 2 (Leave in place)
0.50' AS-Class 4 (Leave in place)

Proposed new CRCP TW:

0.90' CRCP
0.25' HMA-A
0.25' AB–Class 2 (existing to remain in place)
0.50' AS-Class 4 (existing to remain in place)

IMP-8 (PM R47.7/R55.0) Shoulder

Existing Shoulder:

0.30' AC (Remove)
0.85'-1.10' AB-Class 2(Remove)
0.50' AS-Class 4 (Remove 0.05'-0.25')

Proposed new CRCP Shoulder:

0.95' CRCP
0.25' HMA-A
0.25' AB–Class 2
0.20'-0.50' AS-Class 4 (portion of existing to remain in place)

Design Notes:

1) CRCP is Continuously Reinforced Concrete Pavement.

2) HMA-A is Hot Mixed Asphalt – Type A.

3) The existing shoulder structural section does not meet the structural adequacy requirements for use as a traveled way. The shoulder structural section shall be removed where the proposed traveled way replacement will occur.

RAMP PAVEMENT REHABILITATION

Orchard Road / SR-7 Ramps (EB off, EB on, WB off, WB on)

1) Existing Ramp TW is 0.50' AC over 1.85' AB from as-built plans.

2) Cold plane 0.25' existing AC.

3) Repair any failed areas. Clean and seal cracks that are greater than 1'4" wide.

4) Place 0.25' HMA-A.

Bonds Corners Road Ramps (EB on, WB off)

1) Existing Ramp TW (EB on, WB off) is 0.50' AC over 0.55' AB over 1.55' AS from as-built plans.

2) Cold plane 0.25' existing AC.

3) Repair any failed areas. Clean and seal cracks that are greater than 1'4" wide.

4) Place 0.25' HMA-A.

Bonds Corners Road Ramps (EB off, WB on)

1) Existing Ramp TW (EB off, WB on) is 0.35' AC over 0.45' AB over 1.25' AS from as-built plans.

2) Cold plane 0.35' existing AC.

3) Repair any failed areas. Clean and seal cracks that are greater than 1'4" wide.

4) Place 0.35' HMA-A.

Van Der Linden / SR-115 Ramps (EB on, WB off)

1) Existing Ramp TW (EB on, WB off) is 0.60' AC over 0.65' AB over 1.95' AS from as-built plans.

2) Cold plane 0.25' existing AC.

3) Repair any failed areas. Clean and seal cracks that are greater than 1'4" wide.

4) Place 0.25' HMA-A.

Van Der Linden / SR-115 Ramps (EB off, WB on)

1) Existing Ramp TW (EB off, WB on) is 0.35' AC over 0.45' AB over 1.25' AS from as-built plans.

2) Cold plane 0.35' existing AC.

3) Repair any failed areas. Clean and seal cracks that are greater than 1'4" wide.

4) Place 0.35' HMA-A.

RAMP STRUCTURAL SECTION

Ramps: Orchard Road, Bonds Corners Road, and Van Der Linden/SR-115

Ramp Traveled Way (TI = 10, R-value = 10)

Alternate 1	Alternate 2
0.50' HMA-A	0.50' HMA-A
1.80' AB–Class 2	1.10' AB–Class 2
	0.75' AS–Class 4

Ramp Shoulder (TI = 6.5, R-value = 10)

Alternate 1	Alternate 2
0.30' HMA-A	0.30' HMA-A
1.10' AB–Class 2	0.75' AB–Class 2
	0.40' AS–Class 4

Ramp Design Notes:

1) HMA-A is Hot Mixed Asphalt – Type A and should conform to requirements for 3/4", maximum graduation, coarse.

2) Shoulders less than 4' wide shall be designed with the same structural section as the adjacent Traveled Way.

DETOUR STRUCTURAL SECTIONS

MAIN LANE DETOUR:

0.50' HMA-A
1.00' AB–Class 2

RAMP DETOUR:

0.30' HMA-A
1.00' AB–Class 2

Detour Design Notes:

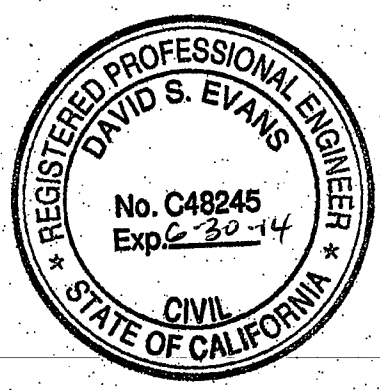
1) HMA-A is Hot Mixed Asphalt – Type A and should conform to requirements for 3/4", maximum graduation, coarse.

2) The existing shoulder structural section may be used as a temporary traveled way for up to 6 months. The shoulder structural section will need to be milled 0.15' with new HMA-A placed prior to use as a detour due to existing rumble strips and profile issues causing a poor ride. The detour speed limit should also be lowered if should is used as a detour.

3) Supplemental Funds should be designated for repair and maintenance of the detour pavement while it is use.

If you have questions with regards to this memorandum, please contact me at 858-467-4056 or cell 618-954-8568.

David Evans
District Pavement Engineer
Materials Engineering Branch



cc: A Padilla (DME)
J Hull (MS 330)
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State of California

Business, Transportation and Housing Agency

Memorandum

To : Michael Oreiro (MS 343)
Project Engineer
Design

Date: January 29, 2015

File: 11-IMP-8
PM R45.5/R55.0
EA 11-41360k
EAFIS 1100000036

From : DEPARTMENT OF TRANSPORTATION - DISTRICT 11
MATERIALS ENGINEERING BRANCH

Subject: **CORROSION STUDY**

In response to your request we are submitting material recommendations for drainage systems within the above referenced project.

The environment is as corrosive to metal pipe and only mildly corrosive to reinforced concrete pipe.

Design values are as follows:

1. pH = 7.8
2. Minimum Resistivity = 150 Ohms.cm
3. Sulfates = 3945 mg/kg
4. Chlorides = 2200 mg/kg
5. Non-abrasive flow conditions

Recommendations for culverts

Aluminum or Aluminized pipe is not acceptable

Polymeric Sheet coated (inside and out) pipe 0.52" (18 gage) or thicker may be used.

Plastic Pipes can be used but must incorporate the minimum and maximum fill height requirements. Type-C or S Polyvinyl Chloride pipe and Type-C or S High Density Polyethylene pipe are acceptable. Consideration should be made to end treatments of plastic pipe to avoid UV exposure. Plastic Pipes are recommended in areas affected by tidal flow.

Use of reinforced concrete pipe (RCP) and or reinforced Concrete Box (RCB), must incorporate type IP (MS) modified cement, type II modified cement with mineral admixture or Type V cement with mineral admixture as set forth in subsection 90-1.01 of the Standard Specifications. Concrete pipe shall contain a minimum 6.0 sac (470#) with a minimum 1.0" cover to steel and a maximum water/cement ratio of 0.35.

Hydraulics must be contacted to address minimum/maximum fill and abrasion considerations.

If you have any questions or comments concerning this report, you can contact J. Scandore at 858-467-4069 or David Evans at 858-467-4056.

Prepared by:

John L. Scandore
M&R Eng. Assoc.

Reviewed By:

David Evans
Assoc TE (CT/Reg.)

Cc: A. Padilla
8-282501.doc

State of California

Business, Transportation and Housing Agency

Memorandum

To : NICOLA BERNARD (MS 340)
Project Manager
Design

Date: March 12, 2015

File: 11-IMP-8
PM R45.5/R55.0
EA 11-413601
EFIS 1113000036

From : **DEPARTMENT OF TRANSPORTATION - DISTRICT 11**
PAVEMENT ENGINEERING SECTION

Subject: **RAMP PAVEMENT REHABILITATION RECOMMENDATIONS-Revision**

The Memo corrects the cold planning depth of the existing AC on each ramp to match the recommended RHMA-G overlay and supersedes the rehab recs in the February 6, 2015 Memo.

In order to comply with the HQ Memorandum, "Crumb Rubber Usage in Hot Mix Asphalt (HMA) Pavements", dated February 10, 2015, the following revisions are made to the November 13, 2014 Structural Section / Pavement Rehabilitation Recommendations for this project.

Alternative RHMA-G pavement strategies are provided for the ramps. Temporary Detours and HMA under CRCP are not affected by the new RHMA mandate.

RAMP PAVEMENT REHABILITATION (RHMA Strategy)

Orchard Road / SR-7 Ramps (EB off, EB on, WB off, WB on)

1) Existing Ramp TW is 0.50' AC over 1.85' AB from as-built plans.

2) Cold plane 0.20' existing AC.

3) Repair any failed areas. Clean and seal cracks that are greater than 1'4" wide.

4) Place 0.20' RHMA-G.

Bonds Corners Road Ramps (EB on, WB off)

1) Existing Ramp TW (EB on, WB off) is 0.50' AC over 0.55' AB over 1.55' AS from as-built plans.

2) Cold plane 0.20' existing AC.

3) Repair any failed areas. Clean and seal cracks that are greater than 1'4" wide.

4) Place 0.20' RHMA-G.

Bonds Corners Road Ramps (EB off, WB on)

1) Existing Ramp TW (EB off, WB on) is 0.35' AC over 0.45' AB over 1.25' AS from as-built plans.

2) Cold plane 0.20' existing AC.

3) Repair any failed areas. Clean and seal cracks that are greater than 1'4" wide.

4) Place 0.20' RHMA-G.

Van Der Linden / SR-115 Ramps (EB on, WB off)

1) Existing Ramp TW (EB on, WB off) is 0.60' AC over 0.65' AB over 1.95' AS from as-built plans.

2) Cold plane 0.20' existing AC.

3) Repair any failed areas. Clean and seal cracks that are greater than 1'4" wide.

4) Place 0.20' RHMA-G.

Van Der Linden / SR-115 Ramps (EB off, WB on)

1) Existing Ramp TW (EB off, WB on) is 0.35' AC over 0.45' AB over 1.25' AS from as-built plans.

2) Cold plane 0.20' existing AC.

3) Repair any failed areas. Clean and seal cracks that are greater than 1'4" wide.

4) Place 0.20' RHMA-G.

Ramp Design Notes:

1) For HMA-A and RHMA-G lifts between 0.15 ft. and 0.20 ft., the recommended aggregate grading for HMA-A and RHMA-G is 1/2 in. maximum graduation. For HMA-A and RHMA-G lifts greater than 0.20 ft., the recommended aggregate grading for HMA-A and RHMA-G is 3/4 in. maximum graduation.

2) RHMA-G is Rubberized Hot Mix Asphalt – Gap Graded.

If you have questions with regards to this memorandum, please contact me at 858-467-4056 or cell 618-954-8568.

David Evans
District Pavement Engineer
Materials Engineering Branch

cc: A Padilla (DME)
R Cather (MS 330)
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