



Municipalidad de Olavarría

MUNICIPALITY OF OLAVARRIA

SECRETARY OF PUBLIC WORKS, INFRASTRUCTURE
AND PUBLIC SERVICES

Public Tender No. 8/25

**OBJECT: PAVING WITH SANDWICH IN BARRIO CARLOS
PILGRIMS – 1ST STAGE**

OFFICIAL BUDGET: \$115,000,000.00

VALUE OF THE FILE: \$ 340,758.-

DEADLINE FOR FILE SALE: 04/30/2025 – 1:00 p.m.

OPENING DATE: 05/05/2025 – 10:00 a.m.

OPENING PLACE: SAN MARTIN PALACE

Envelopes must be submitted to the Tender Office by 10:00 a.m. on May 5, 2025,
when the envelope opening process begins.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH H₂O IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

DESCRIPTIVE MEMORY

The Municipality of Olavarría makes this call for Public Tender in order to pave with H₂O in the Pellegrini neighborhood the streets Tierra del Fuego and Islas Malvinas between the Lisandro de la Torre and Rocha Enecait streets. These streets collect much of the runoff of the neighborhood, although they have curb and gutter, this work will considerably improve the runoff and circulation, especially on rainy days.

The work includes extending the gutters of both streets with H₂O to connect them with the water collection ditch of National Route No. 226, thus avoiding the obstruction of runoff by vegetation growth and facilitating considerably its cleanliness.

The contracting of these works will be carried out by the UNIT PRICE system.

AND UNIT OF MEASUREMENT. The official budget amounts to the sum of ONE HUNDRED FIFTEEN MILLION PESOS (\$115,000,000) and with an estimated construction period of 60 calendar days.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

PARTICULAR TECHNICAL SPECIFICATIONS

ARTICLE 1: APPLICABLE RULES: These specific technical provisions complement and/or modify the general technical specifications that are added and that form an integral part of this Document of Bases and Conditions.

Consequently: All general technical provisions that have not been expressly modified by these specific technical specifications remain fully valid and will be fully applicable for all contractual purposes.

ARTICLE 2: KNOWLEDGE OF THE CONSTRUCTION SITE AND PRIOR SURVEY: The bidder must carry out a complete on-site verification of the terrain and existing facts and make their own calculations. It is their obligation to consult the Administration in writing in case of doubts or discrepancies between these and the documentation, or impediment to carrying out the tasks. Therefore, if the bidder is awarded the work, no difference will be recognized due to alleged discrepancies regarding the conditions of execution.

This work will be executed in accordance with the accompanying documentation, and the Contractor must carry out, at its own expense, all necessary new construction and/or remodeling and/or repair work to allow for its complete completion and the proper functioning of all facilities.

ARTICLE 3: QUALITY TESTS: All quality tests that may be necessary to carry out in connection with the execution of this work will be carried out by the Department of Roads of the Faculty of Engineering of the National University of the Center of the Province of Buenos Aires (UNICEN), located at Avda. Del Valle No. 5717, Olavarría. The costs incurred will in all cases be borne by the Contractor and will be considered included in its quoted prices.

ARTICLE 4: TYPE OF PAVEMENT TO BE CONSTRUCTED: A 0.15 meter thick H°S° pavement will be constructed on the arteries indicated in the attached plan and in the list of blocks included in this file. The execution of the curbs must be taken into account in the item "0.15 m thick H°S° pavement". The concrete to be used will be of type H30 and must meet the condition of having a resistance of 320 kg/cm² at 28 days after placement as specified in detail in the general technical conditions.

In case the Inspection deems it necessary to demolish and reconstruct the curb and gutter deficiencies in levels, slab staggering, etc., will be certified under the item "0.15 m thick concrete pavement". The construction of the curb will be required before the curb sets.
gutter

In cases of force majeure (weather problems), the Inspection may allow concreting with the placement of anchor irons and longitudinal bars.

ARTICLE 5: CONSTRUCTION OF THROUGH DITCHES: Through ditches of 2 m wide, 0.10 m thick and settled on a duly compacted gravel base of 0.10 m thick will be built on the arteries indicated in the attached plan of this file.

The concrete to be used will be H30 type and must meet the requirement of having a strength of 320 kg/cm² 28 days after placement, as specified in detail in the general technical conditions. The item will be certified per unit and will include the counts of the curves that make up the cross section.

ARTICLE 6: BOARDS:



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

a) Contraction joints: These will be constructed every 4.5 meters with 20 mm diameter by 40 cm long dowel bars, spaced every 40 cm and placed at half the thickness of the concrete, parallel to the base and the street axis, as detailed in the general specifications.

b) Longitudinal joints: One will be constructed in the center of the roadway and will have 12 mm diameter, 75 cm long bars spaced every 75 cm halfway along the slab's thickness. The bars will have the characteristics detailed in the general specifications.

c) Expansion joints: These will be constructed at street corners, corresponding to each curve. They will be made of 1" thick by 6" wide compressible wood, with the last inch cut and nailed down so that it can be removed once the concrete has set. They will have 20 mm diameter and 40 cm long dowel bars spaced every 40 cm and positioned in the same manner as the contraction joint bars, with the addition of grease and plastic sleeves to allow for slab movement.

ARTICLE 7: SAWING OF PAVEMENT, EDGE GUTTERS AND THROUGH GUTTERS: All joints will be sawn at 1/3 of the thickness of the slab starting with the contraction joints when the concrete setting allows it and no detachments are verified at the edges. If cracks occur due to deficiencies in the sawing, the Works Inspection may order the replacement of the affected slabs. Mechanical sawing machines will be used and the Contractor will have two (2) units on site at all times to avoid inconveniences due to mechanical failures.

ARTICLE 8: JOINT SEALING: This shall be carried out in all cases before opening to traffic and when humidity conditions permit. First, the joint shall be thoroughly cleaned to remove concrete edges and general dust that could impede the proper pouring of the asphalt material. The Works Inspectorate may order a second sawing if necessary. Cleaning shall be carried out with compressed air. The joint material to be poured shall be of the asphalt type composed of 70% Asfasol G and 30% industrial talc. No material shall be allowed to remain outside the joints once the application is complete. The Company may submit other types of silicone-based materials to the Inspectorate if it deems appropriate. If the joint has not been taken at the time of certification, 10% will be deducted from the item "0.15 m thick concrete pavement", which will be taken into account once executed in subsequent certifications.

ARTICLE 9: CONCRETE CURING: This will be carried out using a plastic membrane made of SOLVENT-BASED ANTISOL WHITE and placed so that it completely covers the concrete without marking it. For this purpose, sprinklers with unobstructed nozzles will be used. In the event of defective curing that causes the proliferation of small cracks, the Works Inspectorate, if it deems it appropriate, may order the replacement of affected slabs without the contractor being able to request financial compensation.

ARTICLE 10: SEWERS AND VEHICLE ACCESS: The location of these drains will be that which corresponds to the position of the sewers and where there are none, they will be located approximately in front of the entrance to the property or in the center of the same if the land is vacant.

In no case shall they be located less than 50 cm from the ends of recesses constructed for vehicle entry and from any joint of any type.

The sewers will be installed by placing a 4" PVC pipe along the width of the curb.

At each vehicle access point or garage, if applicable, the curb will be lowered as specified in the attached plan. If the property is vacant, the curb will not be lowered.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

ARTICLE 11: SINGLE SPECIFICATION SHEET: (PUE of the DVBA) In all cases not provided for and to the extent that they do not conflict with the specifications of this file, the provisions of the Single Specification Sheet of the Road Directorate of the Province of Buenos Aires will be applied as a supplement.

ARTICLE 12: TRANSPORTATION OF DEMOLITION AND DISMANTLING MATERIAL: The proceeds of demolition and dismantling shall be transported to the locations indicated by the Works Inspection at an average distance of 15 km...

ARTICLE 13: CUTTING AND COMPACTION OF SUBGRADE AND CRUSH ROADWAY: The Contractor will clear the roadway to project levels and compact the existing subgrade before constructing a crushed stone roadway in accordance with the general technical specifications included in the file for this case. The existing crushed stone may be reused in the new roadway.

ARTICLE 14: SIGNAGE AND MARKING: Special care must be taken in the signage and marking of the work area during the day and at night, with a large number of signs and illuminated or reflective beacons or any other device that circumstances may require to ensure the objective pursued and avoid accidents and damage to private property. Without prejudice to the provisions of the preceding paragraph, it is the Contractor's exclusive responsibility to assume the costs and obligations arising from any legal action that may arise due to possible accidents and/or damages to third parties.

ARTICLE 15: SIDEWALKS REPAIR: The Contractor shall repair at its own expense any sidewalks that are affected and/or deteriorated as a result of the contracted work.

ARTICLE 16: SHOEING OF CURBS: Once all paving, curb and gutter work has been completed, the Contractor will proceed to shoeing up to the upper level of the curb. The material to be used will be free of stones, and the top will be made of topsoil to allow for subsequent preservation.

ARTICLE 17: TECHNICAL REPRESENTATIVE: For this work, a technical representative with a degree in Civil Engineering or Construction Engineering will be required. The Contractor must have a suitable representative with mobility available on site at all times.

ARTICLE 18: CONSTRUCTION BOOKS: The Contractor will deliver to the Construction Inspection two (2) triplicate books that will be used as the Service Order Book and the Order Notes Book and all the work acts will be recorded in them.

ARTICLE 19: INSPECTION OF WORKS: The Inspection of Works will be in charge of the Directorate of Hydraulic Works and Pavement dependent on the Secretariat of Public Works, Infrastructure and Public Services.

ARTICLE 20: CONSTRUCTION TEAM: The Municipality will require as minimum equipment for this work:

- 1- Concrete plant or concrete supply contract
- 2- Three 8m³ concrete mixer trucks
- 3- A reticulated vibrating rule the width of the roadway
- 4- A 220 hp tracked backhoe
- 5- Dump trucks
- 6- A 120 hp motor grader
- 7- A self-propelled walk-behind roller
- 8- A loader shovel



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

- 9- A smooth drive roller
- 10- A self-propelled sprinkler 11- Two concrete saws
- 12- Other equipment and supplies necessary for the correct execution of the work.

The Municipality will require its presentation before signing the contract for verification. If the equipment is contracted, it must provide reliable proof of its rental for the duration of the project with the required certifications.

ARTICLE 21: ADAPTATION OF PUBLIC SERVICE INSTALLATIONS: If, as a result of the works to be carried out, it is necessary to relocate public service installations, it is understood that said works will be the responsibility of the contractor, who must carry them out himself or request their execution before the corresponding authorities.

The costs involved in such tasks will be considered included in the quoted prices.

In all cases, the Contractor must request the interference of all possible services (water, gas, telephones, electricity, rainwater, etc.) before the start of work.

ARTICLE 22: REJECTION OF WORK: If the Works Inspectorate rejects work due to improper execution or subsequent damage caused by third parties to the paving and/or curb and gutter, the Contractor must redo the work at its sole expense.

ARTICLE 23: CLEANING: The Contractor must leave the work areas perfectly clean and level upon completion of the work. All surplus material will be transported by the Contractor at its own expense the distance indicated in the specific article to the location indicated by the Works Inspection. The costs involved in these tasks will be considered included and prorated in the quoted items.

ARTICLE 24: EXECUTION TERM: The execution period of the work is set at SIXTY (60) calendar days, counted from the signing of the START OF WORK RECORD, in the Service Order Book.

ARTICLE 25: EQUIPMENT BREAKDOWN: In the event of breakage and/or malfunction, the Contractor must replace the equipment immediately. The Contractor is not entitled to request extensions for any downtime. The Inspection may order an increase or replacement of equipment to ensure compliance with the contractual deadlines.

ARTICLE 26: EXTENSIONS OF TERM DUE TO RAIN: The loss due to rain or as a consequence thereof, the amount of eighty-four (84) days every three hundred and sixty (360) calendar days of term, plus the additional amount resulting from applying the same criterion, in proportion, to the excess fractions of term less than three hundred and sixty (360) calendar days, will be considered normal and expected in the established execution term.

Lost days should be understood to coincide with normal working days, that is, excluding Sundays, national holidays, or non-working days, including Saturday half-days.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

In the event that the number of days lost during the execution of the work is greater than that resulting from applying the preceding criterion, the difference between the two shall be recognized as a justified cause of delay.

The compensation period to be granted will result from multiplying the coefficient 1.67 (one point sixty-seven) by the difference between the days lost recorded and those considered as normal loss, rounding to the nearest whole number.

For the purposes of the preceding determination, a monthly rainfall record shall be kept in duplicate, which shall include the date and magnitude of the precipitation, and the weighted incidence in lost days or half-days.

The original and copy will be signed by the Works Inspectorate and Contractor as proof.

The copy will be delivered to the latter, who will have the period granted by Article 37 of the Regulatory Decree of Law No. 6021 to submit the request for recognition to which he or she considers himself or herself entitled.

The rainfall patterns provided by the Hydraulics Department of the Municipality of Olavarría will be considered valid.

ARTICLE 27: SANITARY FACILITIES ON SITE: The contractor, for permanent use by personnel, must have on-site chemical toilets required by safety and hygiene standards.

ARTICLE 28: NIGHT GUARD: A permanent staff member will be required to act as night guard.

ARTICLE 29: SURPLUS FROM OFFICIAL COMPUTATIONS: In the event that, due to construction issues, there are surpluses in the work items, the Municipality may order the completion of the total of the same in the place it deems appropriate within the urban area of the city of Olavarría.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

TECHNICAL SPECIFICATIONS FOR THE EXECUTION OF EARTH MOVEMENT AND SUBGRADE IMPROVEMENT

Article 1 - DESCRIPTION OF WORKS: The movement of earth and improvement of subgrade will include the works listed below.

- a) Clearing the land to the width indicated on the plans from the boundaries of all the surfaces intended for the execution of cuttings, embankments, vaults, ditches, trenches and loans for soil extraction.
- b) The execution of the excavations and the filling of the trenches and their consolidation, the construction of embankments, shoulders and access ramps to the new roads with the supply and transportation of the necessary land, the construction of the lateral drainage ditches with the transport of earth surplus of all listed works up to 15,000 meters away. The total movement of land that the Contractor must carry out under the conditions of this document is determined by the profiles indicated in the plans, plus a surplus of up to ten percent (10%) of the amount that results in the total amount of the work.
- c) Special compaction of embankments and subgrade.
- d) Improvement of the subgrade when indicated by the special specifications.

All listed jobs will be included in the unit prices quoted for the construction of the road.

Article 2 - CLEANING OF THE LAND: The cleaning of the land will consist of the removal of bushes and roots so as to leave the ground clean and free in a surface suitable for starting the works. Cleaning products must be destroyed or removed from the works, taking care to not cause harm to adjacent owners.

Article 3 - CLEARING OF SURPLUS LAND: Clearing will be done in accordance with the profiles indicated in the plans for the purposes of the total use of the land from the cuttings in the formation of embankments; the contractor must arrange the works in such a way to start at the same time the excavation for the cuttings and the filling of the embankments, the Surplus soil will be immediately transported up to a maximum distance of 15,000 meters and unload at the site indicated by the inspection.

Article 4 – EMBANKMENT FILLING: The existing trenches on the site that will correspond to the works that must be deleted and will be filled in and consolidated prior to the Construction of the embankments. The embankments will be made according to the profiles indicated in the plans.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

The existing base will be scarified to a depth of ten centimeters (10cm) to ensure the mechanical connection between the existing surface and the new embankment.

The construction of the embankment will be done by horizontal layers of homogeneous material no larger than 20cm thick loose and will cover the entire width of the finished embankment including shoulders, which must be leveled with graders or other approved equipment.

It will be allowed to incorporate into the embankment, soil with excessive moisture content, considering as such to that which equals or exceeds the plastic limit of the soil. Each of these layers will be pressed sufficiently with a crowbar roller or the one most appropriate to the type of soil, until the required density has been obtained.

Article 5 – SPECIAL COMPACTION: This operation will consist of carrying out the following: handling and irrigation work necessary for soil compaction, until obtaining the maximum density resulting from the "Normal Compaction" test (Art. 11), with the tolerances which are set out in the following paragraph:

The soil moisture content will be adjusted to the conditions that ensure the need maximum, with a tolerance of more than ten percent (10%), and less than twenty percent (20 %) of said optimum humidity. The optimum humidity will be considered to be that which in the test of Proctor allows to obtain the maximum density. If necessary, the humidity will be corrected by soil scarification during this operation or by irrigation.

Article 6 - ADDITION FOR THE IMPROVEMENT OF THE SUBGRADE:

Characteristics: The fine aggregate will be made up of natural sands or other inert materials of similar approved characteristics or a combination of them and will present strong particles durable and that meet the stipulations of this document.

Samples: The quantity of material extracted for the approval test will be at least fifty kilograms (50 kg) and for surveillance five kilograms (5 kg).

Organic matter: The presence of organic matter will be recognized by means of the test of the sodium hydrate, an unfavorable result being sufficient for the sand to be rejected.

Deleterious substances: The percentage of deleterious substances shall not exceed the following values by weight:

Removed by decantation	2%
Board	2%
Coal	1%
Clay soils	1%
Other substances and various fragments	1%



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

The allowable sum of these percentages shall not exceed four percent (4%) by weight. When the percentage of foreign matter exceeds said four percent (4%) the fine aggregate must be washed before use.

Granulometric composition: The aggregate for subgrade improvement must be graduated in a way that meets the following specifications:

It will pass through sieve no. 4		100%
It will pass through sieve no. 8	90	100%
It will pass through sieve no. 16	70	95%
It will pass through sieve no. 30	10	75%
It will pass through sieve no. 50	0	25%

Article 7: IMPROVEMENT OF THE SUBGRADE: This operation will constitute the realization of the work necessary to improve the subgrade soil until obtaining the granulometric composition and required density. The Special Specifications will indicate in which case and how this improvement is projected. It will begin by outlining the surface of the clearing or filling the cross section indicated in the plans, then scarifying a thickness of ten centimeters (10cm) in the width fixed in the plans as the width of the roadway, plus fifty centimeters (50cm) on each side, the soil thus removed will be crumbled by appropriate equipment (disc harrow, grader, etc.) until it meets the following granulometry:

It will pass through sieve no. 1		100%
It will pass through sieve no. 4 minimum		80%
It will pass through sieve no. 10		60%

Once this granulometry is obtained, a central ridge with a cross-section will be formed uniform on which the aggregate will be distributed (Article 7) in an adequate and necessary quantity with a maximum of 80 kg per square meter of improved sub-crusher. The mixture will be made using suitable equipment until sufficient uniformity is achieved which will be considered fulfilled when the results of the particle size tests on samples taken from different points do not show a difference greater than 5% in the percentages that pass through sieves no. 10 and 4. Once the mixture is approved, it will be brought to the humidity conditions that ensure the density maximum, with a tolerance of more than ten percent (10%) and less than twenty percent (20%) of said optimal humidity.

The optimum humidity will be considered to be that which in the Proctor test allows obtaining the density maximum.

Once the previous operation has been completed, the mixture will be distributed evenly throughout the width specified in such a way as to ensure a thickness of ten centimeters (10 cm) after compacted and that the resulting surface is the one indicated in the plans.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

Compaction will be done using a shovel-foot roller or a multiple pneumatic roller that ensures a pressure of thirty kilograms per centimeter of tread width (30kg./cm.).

This compaction will be considered complete when the improved subgrade has been obtained. maximum density.

If necessary, the humidity of the mixture will be corrected, either by scarifying or watering it. same during the compaction operation.

Article 8: CYLINDERING: Once the levels marked on the plans for the subgrade, whether cut or fill, the operation will be carried out by passing a roller roller smooth, ensuring a pressure of forty kilograms (40kg) per centimeter of rim width. The minimum diameter of the rollers will be one meter (1 m).

Article 9 RECEPTION OF THE SUBGRADE: The subgrade will be prepared in sections of 100 meters or by whole blocks in the specified manner.

The pavement will not be permitted to be laid before the subgrade has been received by the inspection, which must be inspected within forty-eight hours (48 hours) subsequent to having been requested by the contractor.

Article 10 DRAINAGE DITCHES: When in typical profile plans, (Pavement without curb) indicate lateral drainage ditches, these will be built with the levels and slopes that indicate the plans.

The cross sections will be those indicated by the cross sections of the planimetry and/or layout plans.

Article 11 PROCTOR ESSAY:

a) Description: The Proctor test referred to in Article 5 of these Specifications complementary in the so-called Proctor STANDARD which consists of determining the density maximum soil density in wet and dry state in three layers, inside a cylindrical mold of dimensions determined by means of a pincer with the characteristics that will be detailed. 25 blows will be applied per layer and with a free fall height of thirty centimeters. The procedure to Continued testing must strictly comply with American ASTM standards.

b) B) Equipment: The Contractor must provide the following elements: _A cylinder of approximately 10 centimeters in internal diameter and 11.5 centimeters in height with a flat base movable and a cylindrical extension of the same diameter and 5 cm. Height adjusted to the part top of the main cylinder.

A metal pin weighing 2.5 kg and measuring 5.08 centimeters in diameter at the base.

A stove (110° C.)



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

Ten aluminum filter weights.

The rest of the equipment needed for the Proctor test has been included in the stipulated material for the general laboratory of the work.

Article 12: DETERMINATION OF DENSITY: to verify compliance with the specified in Article 6 of this document, the Inspection will make determinations of the density obtained in the last compacted layer in embankment or cut, 30 cm thick. In randomly selected sites with a minimum of one by four or every 100 meters and alternating center edge.

In-situ density of dry soil will be obtained by dividing and apparent volume and performing the moisture correction.

In the previous paragraph, apparent volume is understood as the determined filling of the space left by the extracted soil with uniform gravel sands and known unit weight.

TECHNICAL SPECIFICATIONS FOR ROADWAY CONSTRUCTION OF ROCK AND CEMENT SOIL

Article 1: DESCRIPTION OF THE BASE: It will be built by one or several layers of rough crushed, placed on the subgrade, in accordance with the indications of the plans and specifications of this document and extracted from the indicated deposits, or that during the construction of the works as indicated by the Inspection. Material from the existing base may be used, as long as they meet the required thicknesses.

Article 2° MATERIAL: The material to be used will consist of selected rough stone of such quality that allows to obtain, once subjected to the operations of crushing, screening and mixing, a final product that meets the requirements specified in this document. Tosca may be used not previously crushed, provided that when placed on the subgrade it can be crushed by the passage of heavy equipment before compaction.

The rough to be used will be approved by the Inspection, and must meet the following requirements:

Granulometry: (U: S sieves, Standard square opening)

Pass through a 2" sieve	100%
Pass through a 1" sieve	70-95%
Pass through 3/8" sieve	50-75%
Mesh screen n° 40	20-45%
Mesh filter n° 200	10-25%

The granulometric curve must develop uniformly.

The fraction released by sieve No. 40 (forty) will have a liquid limit less than forty (40) and a plasticity index of seven (7).



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

Support Value: The minimum support value to be obtained once the base is built will be the one established in the Particular Provisions. Said support value will be determined by the California method, considering the average within the first two penetrations for embedded sample, with a compaction density between one hundred percent (100%) of the optimum Proctor and the California static test.

Based on the results of these tests, the Contractor's Laboratory will determine the quantities of the different types of rough that must be brought to the work to achieve a product that meet the established requirements and obtain a base of the thickness indicated in the plans. The records and results of the calculation of quantities will be controlled by the Inspection that You may order any change in the proportions if you thereby obtain an improvement in base conditions.

Article 3: EQUIPMENT:

I) The equipment, tools and other implements used for the construction of the base must be previously approved by the Inspection, which may require the change of what it deems is not acceptable or convenient. All implements must be provided in sufficient numbers in order to complete the work within the contractual period, and must be kept in good condition conditions of use during the time of its employment in the work.

II) for the mixture of the different types of rough and conformation of the road, the following must be used: machinery equipped with tires that do not cause damage to the subgrade or specific bases or under construction.

Motor graders or self-graders will be equipped with two-meter-long blades at least one of them equipped with a scarifier.

III) Vehicles used in the transportation of materials will be equipped with tires pneumatic vehicles when they must carry out all or part of the transport on the subgrade or bases completed or under construction. They will be provided with regularly shaped boxes, the capacity of which be easy to measure and will be of such construction that there is no possibility of loss of the material transported through a joint or orifice.

The plane formed by the upper edge of the box must be practically horizontal. Each vehicle will have an identification number, placed in a visible manner.

IV) A sufficient number of trucks will be available for the supply and distribution of water sprinklers equipped with dual pneumatic tires.

They must be of a type that ensures uniform distribution of the necessary water.

V) The pneumatic rollers will have two (2) axles, with at least five wheels in the rear and no less than four in the front arranged so as to cover the total width covered by the roller.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

The internal air pressure of the tires shall not be less than three point fifty kilograms per square centimeter (3.50kg./cm.2) and the pressure exerted by each wheel will be thirty-five kilograms (35 > kg.) per centimeter of tire width (tread) as a minimum.

The roller will be of a type that allows its weight to be increased until the pressure of each wheel rises at fifty kilograms per centimeter of rim width.

VI) Smooth type rollers will be three-wheeled automotive "Tanden", their wheels having rear exert a pressure of no less than forty (40) and no more than seventy (70) kilograms per centimeter of rim width.

Tractors whose rear wheels meet this requirement may be used as equipment of compaction.

VII) The Goat's Foot roller will have a minimum contact pressure of ten kilograms per square centimeter (10 kg. / cm²) and may be increased.

ARTICLE 4: PREPARATION OF MATERIALS: In order to obtain a material from the specified conditions and make the use of tuff deposits more economical available, the excavated material will be separated into two or three different fractions obtained by through crushing and screening operations, obtained by combining these fractions the specified mixture with the granulometry established in Art. 2) of these Specifications.

ARTICLE 5: CONSTRUCTION METHOD:

I) Transportation of material: The transportation of material over the subgrade or finished base does not It will be permitted when, in the opinion of the Inspection, this would result in harm to said surfaces due to its state of humidity or other causes.

The Contractor is obliged to preserve and restore all public roads on which the works are carried out. transport, leaving it in conditions as satisfactory as those it was in before initiated. Where there is no practicable road to carry out the transport, it will be the contractor will be responsible for its construction.

II) Placement of the crushed rough: The material produced from the crushed rough will be placed on the prepared subgrade, in the quantities set according to what is specified in Art. 2º) and the It will be formed in a ridge of uniform section.

In order to verify this uniformity the trestle will be measured at appropriate intervals.

frequent, and the Contractor must correct deficiencies in uniformity and volume when the material for the base is obtained on site.

By mixing two or more fractions, they may be placed superimposed in order to facilitate subsequent mixing operations, ensuring that each of the fractions is distributed evenly and in the correct proportion. If with the methods used in the



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

distribution if this result is not obtained, the Inspection may order that the fractions be placed on separate trestles, verifying their uniformity and quantity on each one.

III) Mixing: The different fractions will be mixed in an intimate and uniform manner.

Mixing operations can be carried out at the site or at the work site, using, in the latter case, case, portable mixers, graders, multi-blade mixers or any other

element that does not cause segregation of the thickest portion of the material. Once the uniform mixture, a ridge of 100 mm will be formed on the subgrade with the resulting product. uniform section.

If the mixing operations are carried out before transporting the construction material, it may

For this purpose, mixing plants approved by the Inspection may be used.

IV) Mixture controller: To control the mixture conditions, a set of two will be taken.

samples: one for official analysis and one for re-analysis. A set of samples will be taken

samples at least for every two hundred cubic meters (200m³) of mixed materials.

Sampling will be carried out by cutting the ridge transversely, using a wide and

said cut will be extracted by quartering, the sufficient material to prepare the sampling set. If the

The mixing is carried out in a fixed or portable plant, the mixture of pastes will be extracted at intervals suitable for meeting the established requirements.

If according to the analysis carried out, the mixture does not meet the conditions specified in the

same, the Contractor must make its correction, after which the sampling will be repeated and

the tests of the material corrected in the indicated manner.

If the Contractor does not agree with the results of the official analysis, a

repetition of the same using the sample taken with said object.

The elements, containers and personnel necessary for taking samples, their conditioning and

transportation to the laboratory will be the responsibility of the Contractor.

V) Watering it: Once the roughage has been spread over the subgrade, it will be watered,

effects of obtaining uniformly throughout the mass the necessary humidity to obtain the

compaction corresponding to the support value established in this document.

VI) Compaction: Once the necessary humidity of the roughage has been obtained, compaction of the roughage will begin.

same in layers of uniform thickness no greater than twenty-five centimeters (25cm) measured loose.

Each layer will be intensely compacted using the crowbar roller whenever in its judgment

Inspection does not produce re-crushing of the material, continuing with passes of

smooth roller and multiple tire of the specified characteristics.

The base will be compacted starting at the edges and continuing progressively.

towards the center, during compaction, water irrigation will continue in the quantities and

opportunities necessary to obtain a base in accordance with the specifications in this document.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

The compaction on site must be carried out in such a way that the support value to be obtained, with embedded samples, as an average of the two penetrations, is not less than seventy (70)

California method with density equal to that obtained on site.

In no case may the weight per unit of the base in dry state be less than one hundred percent (100%) of the corresponding optimum humidity of the normal compaction test (Proctor).

VII) Construction alternative: any alternative in the form of preparation of the the materials or the construction method, provided that with said alternative the following is obtained: final result, a finished work, that meets the requirements specified in what the base and other demands and requirements.

Any procedure for preparing the material or constructing the base other than specified, must be previously approved by the Inspection, which may require the carrying out tests to assess their effectiveness before giving a final authorisation.

Article 6: SOIL PREPARATION CEMENT e= 0.15 M:

The unit price of this item includes: the construction of a soil cement base with a adequate incorporation of water that allows obtaining the compacted thickness of 15 cm (final) for base of the paving stones. It also includes compaction of the aforementioned base, profiling and removal of existing surplus material, the provision of materials on site, including equipment, labor, fuel, transportation, distribution, compaction and all other tasks necessary for its execution in accordance with the Technical Specifications.

-Soil: In those circumstances in which the soil is provided by the Contractor, the same

It must be homogeneous and not contain roots, clumps of grass, or other foreign substances. putrescible; said soil must meet the following characteristics:

- Liquid Limit \leq 40%
- Plasticity Index \leq 10%
- Swelling \leq 1%

-Portland Cement: Normal Portland Cement (CPN40) or some other characterized cement will be used.

by IRAM Standard No. 50000 of the same resistance level or category. Mixing is not permitted of cements from different factories or brands, as well as from different composition and/or categorization characteristics. The cement must be used in perfect powdery state, without the slightest tendency to agglomerate due to humidity or any other cause any.

- Water: The water used for the execution of the soil cement base will not contain salts, oils, acids, organic matter or any other substance harmful to cement; water

Drinking water may be used in all cases, and the Inspection may order its analysis. chemist, if in doubt.

The cement dosage will refer to the weight of dry soil, the project thicknesses will be



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

They will be understood as measured on the compacted mixture, executed in a single layer and in accordance to what is established in the Particular Technical Specifications. The percentage of Portland cement to be incorporated will be 8%.

The distribution of the mixture may be carried out using a motor grader, mechanical distributors or any other suitable equipment, subject to prior authorization from the Inspection. The distributors of the water will be provided in all cases with pressurized irrigation elements, in such a way that ensure a fine spray and penetration of water and a uniform distribution of humidity, with appropriate bars of sufficient number of peaks per unit of length and with quick and total shut-off and interruption valves. The irrigation elements, approved by the Inspection, will be mounted on self-propelled units, not allowing Under no circumstances should irrigation tanks be towed.

After compacting the mixture in the manner indicated in the previous section, will reshape the surface obtained so that the longitudinal profile and the section are satisfied specified crosswise, profiling it with a motor grader, supplying it with more moisture If this were necessary, compact the surface thus formed with a pneumatic roller. multiple and with smooth roller roller. The aforementioned finish must be supplemented by way to obtain a crack-free, firmly bonded surface, without ripples or loose material and adjusted to the Project profile. Between work shifts and at any time construction joint material that does not present adequate compaction will be removed, cut out and replaced with properly mixed soil cement and moistened to be compacted to the specified density.

Article 7: CONTROLS AND TOLERANCES: Once the rough base is finished and before starting the In the next construction stage, the Inspection will control the base for entire blocks, at least including the corresponding part of the adjacent intersection streets and sections of roadway length not greater than one hundred and fifty meters (150m) of development on the axis of the same, affecting the checks set out below:

- a) Smoothness: The surface finish of each block or section must be smooth, firmly united, free of cracks, ripples or loose material, shall conform strictly to the pumping transverse and longitudinal slopes set in the plans. If the three-meter rule is placed (3 meters) in length parallel to the axis of the roadway, bumps or depressions will be verified larger than one and a half centimeters (1.50 cm) the material must be removed by filling or scarifying as appropriate to correct smoothness defects. The filling will be done with homogeneous, layered material with a thickness of not less than five centimeters (5cm).
- b) Thickness: The thickness of each block or section will be the result of the average of the thicknesses measured in three perforations located by the Inspection in an alternate manner according to with the following rule: left edge, center, right edge, left edge, etc. The thickness



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

average should not be less than that indicated in the plans. The blocks or sections of built base in which the average thickness is less than eighty percent (80%) of the theoretical thickness of the project, may, if deemed necessary by the Inspection, be rejected and rebuilt at the expense of the Contractor. In cases authorized by the Inspection, they may be corrected in accordance with specified in the following paragraph. The blocks or sections in which the average thickness is not is less than eighty percent (80%) of the theoretical thickness of the project, they must be corrected, taking the thickness projected by scarification of the surface and adding the necessary amount of material in layers of thickness not less than five centimeters (5cm.) Without Subject to the terms specified above, all points at which the measured thickness is less than one centimeter (1 cm) at the average thickness determined in the manner described previously, will be considered defective. The new perforations will be used to locate the area of sufficient thickness, which must be completely corrected. The correction of the area Defective treatment will consist of scarifying the base to a thickness of no less than five centimeters (5cm) and the addition of new material in the quantity necessary to correct the fault. set will be compacted and profiled.



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE".**

GENERAL TECHNIQUES FOR PAVEMENT WORKS CONCRETE AND ARTICULATED

Art. No. 1: CONSTRUCTION OF THE SLAB (ROADWAY, CURB, GUTTER OR BADDEN)

1.1.- Materials in general: When starting the work, the Contractor will inform the Inspection regarding the materials it plans to use, sending samples of them, which will be tested, and if they comply with the requirements corresponding, approved.

The Contractor is responsible for the quality of each of the materials it uses.

When the Inspection deems it necessary, through the designated laboratory, it will verify whether the consignments of materials have the same characteristics as the approved samples.

If the Contractor wishes to change the materials or dosage, it must request prior approval, as in the initial act.

If the Contractor chooses to use any type of additive, it must present its characteristics and proportion of use, and the Inspection will proceed to take samples to request the execution of the corresponding tests.

The Contractor must have all the machinery and tools on site to complete the work in accordance with the "Work Plan" and in compliance with the requirements of the bidding document.

Approval of the work plan does not obligate the Inspectorate to accept any liability if it causes inconvenience of any kind or creates difficulties in carrying out and/or completing the work in accordance with the contract.

Before starting the work, the necessary equipment for the execution of the slabs must be submitted to the Inspection for approval. The contractor is obliged to maintain them in optimal working condition. Delays caused by breakage and repair will not entitle the contractor to an extension of the contract period.

Art. No. 2: CONCRETE FOR THE PREPARATION OF THE SLAB (ROADWAY, CURB, GUTTER OR BADEN).

2.1.- Concrete mixing plant: The Contractor will supply the concrete from a concrete mixing plant, which must have a production capacity in accordance with the needs of the work and the contractual term, and must have automatic systems for dosage control.

The concrete mixer will have sufficient capacity to allow the work to be completed within the established timeframes as appropriate.

The water measuring equipment must be expressed in liters, and its accuracy must not be affected by variations in water main pressure. It must have an automatic device to shut off the water supply from the measuring tank when it has provided the required amount. This type of equipment must ensure that the quantity delivered to the mixer is not affected by the tilt of the mixer in any direction. It must not leak water, and if the measuring device fails to operate, the mixer will not be able to operate.



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE".**

provision of the correct amount of water, the operation of the concrete mixer will be suspended until the necessary repairs are carried out.

2. 2.- Mixing and transporting the concrete: The materials will be mixed until the cement is evenly distributed and the result is a homogeneous concrete in any portion of the paste.

The concrete mixer or truck mixer shall not be operated with a load greater than the capacity indicated by the factory. Transporting concrete to the construction site shall only be permitted using a concrete mixer or agitator.

A uniform mixture should be produced between 70 to 100 revolutions, at a speed of 8 to 15 RPM. From the mixing stage, a stirring speed of 2 to 6 RPM should be maintained (varying with the transport time).

Before unloading, the concrete must be vigorously mixed with a drum rotation speed that ensures uniformity of the concrete composition, and without showing signs of segregation of the materials.

Internal paddles on the concrete mixer drum that wear more than specified by the manufacturer must be replaced with new ones.

During the transport of the concrete, every care will be taken to ensure that it reaches the construction site as quickly as possible and in the best possible condition. Concrete that has been prepared for more than 45 minutes or shows signs of setting or segregation will not be permitted. Concrete that is reconditioned by adding water or other means will not be permitted.

2.3.- Handling of materials: Except in cases where the aggregates are transported directly to the warehouses by trucks, they will be stored in piles or stacks, avoiding their conicity due to the segregation that results when the larger particles roll outwards, leaving the core of fine material.

The location where the pile will be placed must be clean, level and free of all foreign material.

2.4.- Concrete composition: Portland cement concrete will basically consist of a homogeneous mixture of the following materials: water, Portland cement, fine aggregate and coarse aggregate.

The proportions of the components shall be such that the test specimens extracted from both the fresh concrete at the time of its incorporation into the work and those extracted from the finished slabs meet the strength requirements set forth in this specification. The mix shall be of uniform quality, and its transportation, placement, compaction, and curing shall be carried out so that the concrete is compact, of uniform texture, strong, and durable, in accordance with these specifications. CIRSOC Regulation 201 shall apply to any questions that may arise during the execution of the work.

2.5.- Materials:

- Portland cement, as stipulated in Article 10 of this heading. IRAM 1503.

- - Water for mortars and concrete, as stipulated in Article No. 11 of this heading. WRATH 1601.

- - Fine Aggregate, as stipulated in Article No. 12 of this heading. IRAM 1505, 1512, 1627.

- - Coarse Aggregate, as stipulated in Article No. 13 of this heading. IRAM 1505, 1531, 1627.

- - Steels, stipulated in 9-3 (Supplementary Provisions).



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE".**

2. 6.- Concrete dosage: The Contractor will dose the mixture that will be used for making the concrete, using a cement content of no less than **350 kg/m³** of concrete, to obtain a compressive strength of **300 kg/cm²** in standard test pieces, as well as that obtained through the test of perforated cores, always referenced to 28 days and a slenderness equal to two.

The consistency determined using the slump cone and following the procedure in IRAM Standard 1536 must be consistently satisfied. Any batch that does not show a slump between 3 cm and 7 cm will be rejected.

The Contractor must submit the proposed concrete dosages for the construction project to the Inspection with sufficient advance notice and, once all requirements have been met, request its approval. To do so, a batch must be prepared with each proposed dosage.

Each block will be used to construct a slab with a minimum area of two square meters each. Three cylindrical test pieces will be taken from each block, and three cores will be drilled from each slab. Compression tests will be carried out at ages of 7 and 28 days, all in accordance with IRAM Standard 1541, and it will be verified that the strengths are not lower than required.

If air-entrained or other additives are used, the proportion, brand, application technique, and history of use in public works must be indicated.

The Contractor shall notify the Inspection of the approved dosage adopted at least five days before the start of concreting, attaching the corresponding calculation report, indicating all materials to be used, brands, characteristics and expected settlements.

Until the established requirements have been satisfactorily fulfilled, the Inspection will not allow any concreting to be carried out.

In the event that during the execution of the work the minimum resistances established are not obtained, the Inspection may request and/or authorize a variation in the dosage, brand of cement, granulometry of the aggregates, etc., and comply again with all the requirements for dosage approval.

Under no circumstances may the Company modify the approved dosage (brand of cement, aggregate granulometry, additives, etc.), without first requesting the corresponding authorization from the Inspection, for which it must comply with all the requirements for dosage approval.

2.7.- Measuring Equipment: The Contractor shall provide the necessary elements (approved by the Inspectorate prior to use) to carry out the measurements. They shall be constructed in such a way as to allow easy control over the quantities of each of the elements to be used and so that (if necessary) they may be increased or decreased.

In a visible place in the materials measuring plant, clearly and in view of the operator in charge of handling it, the quantities, main characteristics and other information of the component materials that make up each m³ of concrete, slump of fresh concrete, etc. will be indicated.

2. 8.- Concreting temperature: Concrete will not be prepared or placed when the ambient temperature in the shade and away from artificial heat is 10 °C downwards, or 30 °C upwards.



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 “PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE”.**

Furthermore, the temperature of the concrete at the time of placement must be between 16°C and 30°C; otherwise, concreting work will be immediately suspended and any concrete placed outside the specified range will be removed.

The aggregates must be free of ice, and the Contractor may proceed to heat the aggregates (maximum 60°C) or the water, for which the construction process must be submitted to the Inspection prior to acceptance. To protect the executed concrete against the effects of low temperatures, when temperatures are expected to drop below 5°C, a sufficient quantity of elements approved by the Inspection must be prepared and spread over the concrete. The thickness of this layer must be sufficient to prevent the concrete from freezing before it has completely hardened, without affecting the surface texture. Such protection must be maintained for as long as necessary, at the sole discretion of the Inspection.

To verify temperatures, the Contractor must provide the Inspection with a previously verified digital thermometer suitable for measuring ambient and concrete temperatures.

Although the Contractor is responsible for the quality and strength of the concrete placed in cold or hot weather and any part damaged by the action of temperatures will be completely removed and replaced at its expense, it must comply with the following: provided in this section.

2.9.- Threats of rain: Concrete unloading will not be permitted to begin or continue, at the sole and exclusive discretion of the Inspection, if there is a threat of rain. The Contractor must always have equipment to protect the concrete in case of unexpected rain.

Art. No. 3: MOLDS

The molds must be made of steel with a minimum thickness of 4 to 5 mm; wooden molds are strictly prohibited.

They shall be a minimum of 2.50 m long, free of warping or other deformation, and their dimensions and shapes shall be such that they strictly correspond to the profiles indicated in the plans. The width of the support base shall not be less than 0.15 m. They must be bolted or tongue-and-groove to maintain alignment (vertical and horizontal).

Before use, the Contractor shall submit the molds for Inspection approval.

They must be firmly held in place using steel stakes, ensuring they do not shift or settle during concreting and finishing operations. If they need to be lifted, appropriate stakes (not filled with earth or other similar material) must be placed under the base of the forms to ensure proper support. They must be cleaned, carefully, and thoroughly greased before concreting begins.

The number of molds that the Contractor must have will be such that they can be left in place for at least eighteen hours after the concrete has been placed, or more.

time in case of cold weather, and solely at the discretion of the Inspection.

Once the molds have been removed, any gaps or niches that appear in the concrete must be immediately filled with a mortar composed of one part cement and one part fine sand and a concrete binding additive.



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE".**

Art. No. 4: CONCRETING

4. 1.- Concreting the Roadway:

4. 1. 1- Placing the concrete: Once the subgrade has been prepared in accordance with the provisions of these technical specifications, the moulds will be placed.

The alignment (or curve radii), thickness and levels of the pavement will be determined by the external molds of the pavement (according to the indications of the corresponding plans) and will be carefully verified before and after the pavement is built.

Immediately after mixing, the concrete will be placed on the prepared surface. It will be spread as far as possible using channels across the entire width of the roadway and to a thickness slightly greater than the height of the pavement.

4. 1. 2.- Compaction: Compaction will be carried out using a vibrating screed (**in a single operation across the entire width of the roadway**), for which said screed must have the appropriate length and adequate characteristics (as minimum required equipment), except in wings, turning bays or other particular sector at the sole and exclusive discretion of the Inspection, which may be carried out in different strips, but always through the use of a vibrating screed of appropriate length, working it radially in the area of the curve in the case of wings.

When compacting using vibrating screeds, they must be in optimal condition and have the necessary number of impacts, as determined by the Inspector, as well as the travel speed. Furthermore, the screed must be heavy enough to always work with a surplus of concrete above the bottom line of the screed, in order to allow for better vibration.

In the event of breakage or damage to the vibrating screed (if the concrete is distributed and within the admissible times, according to this same article, section 4.5) or when for technical reasons, and in the sole judgment of the Inspector, the vibrating screed cannot be used, compaction may be carried out using a tamping gauge, after vibration with an immersion vibrator. Said tamping gauge must be 10 cm wide.

and a length greater than the width of the roadway and with a weight between 5 kg/m and 10 kg/m. This tamper, built in such a way that it must rest on the external molds, must be the exact profile of the roadway, which must remain unchanged and in optimal working condition. This tamper will be moved from the ends with force and speed so that the surface is tamped until a uniform and consolidated compact mass is obtained. This operation will leave one centimeter more thickness in the concrete. Once finished During the tamping operation, the tamper will be passed again, swinging it transversely in order to remove the excess concrete left in the first operation.

The immersion vibrator must penetrate the concrete and be extracted vertically. Once the operation is complete, no gaps should remain at the insertion site. They must be inserted at uniform distances slightly smaller than the radius of the operating circle.

Concreting operations may be carried out using finishing machines.

They must be approved by the Inspection.

If for any reason the concrete structure obtained by vibration must be altered, it must be performed again (especially in the joint and edge areas).



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 “PAVING WITH Ho So IN CARLOS NEIGHBORHOOD PILGRIMS – 1ST STAGE”.

Vibration shall not be permitted using a screed resting on concrete less than 48 hours old.

The pavement thickness specifications must be adhered to at all points. Particular attention must be paid to areas around storm drains, manholes, etc.

4.1.3.- Completion: Once the above operation is complete, small surface defects in the concrete, especially in areas adjacent to the curb forms and transverse joints, may be corrected using trowels. This is only done in exceptional cases and where extreme necessity exists and at the sole discretion of the Inspectorate.

The concrete surface will then be finished with transverse and longitudinal movements using a wool and rubber belt. It must be kept clean and periodically moistened. It will be handled from the sides, so its length will be greater than the width of the pavement.

The first pass will be made when the free surface water disappears, oscillating it transversely about 30 cm with a small longitudinal advance. Before the initial setting of the concrete begins, the final pass of the belt will be made, oscillating only about 10 cm longitudinally.

The finish can be done alternatively using a damp burlap bag (one meter of contact) or stiff bristle brushes (without causing tearing).

Remember that the road surface finishing work aims to create a rough surface, improving vehicle grip and stability, except in runoff areas.

No water will be added to the surface for finishing the concrete. Only if plastic cracking appears after finishing, may water be added in the form of a mist (atomized) to restore gloss until curing begins.

4. 1. 4.- Surface verification: After the final finish, the regularity and smoothness of the transverse and longitudinal profile will be verified by means of rules, which the Contractor must have on site and in optimal conditions.

Any irregularities noted must be corrected before the concrete sets. Otherwise, the raised surfaces must be removed with carborundum or a similar material. Smoothing the surface using a hammer, mallet, or other similar tool is not permitted.

Depressions will not be allowed.

The rule for controlling the cross-sectional profile must have exactly the shape of the specified gauge and a length greater than the width of the roadway.

The rule for controlling the longitudinal profile must have a minimum length of three meters, be perfectly straight, and be applied parallel to the longitudinal axis of the roadway (strict control in the one-meter-wide strip corresponding to gutters and/or speed bumps).

4. 1. 5.- Duration of operations: The Inspection will reject the concrete at its sole discretion if more than 30 minutes elapse from the time it is deposited until the end of the operations specified above.

4. 1. 6.- Mobile Bridge: To facilitate access to certain points of the pavement, one or more mobile bridges will be installed, which must not have any point of contact with the pavement.



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 “PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE”.**

4. 1. 7.- Equipment for compacting and finishing the concrete: The Contractor must have the following equipment to compact and finish the concrete:

* A motor-driven finishing machine, of a model approved by the Inspection and equipped with a device to prevent oil or fuel from falling onto the concrete.

The minimum required equipment may be vibrating screeds with adequate characteristics and length to carry out compaction in a single strip across the entire width of the roadway (except in wings, turning bays or other specific sector at the sole and exclusive discretion of the Inspection).

* Two or more 3 m long rulers, made of appropriate and non-deformable material, straight or with curved gauge as appropriate.

* Two or more working bridges, provided with wheels and constructed in such a way that they are easy to roll and that, when placed on the side molds, their lower part can never touch the pavement.

* A two-handled ruler for longitudinally smoothing the pavement at least 0.50 m greater than the width of the pavement and at least 0.15 m wide.

* Two long-handled wooden floats, with a blade measuring 0.80 m long and 0.45 m wide.

* Two wool and rubber belts, with two to four folds, no less than 20 cm and no more than 25 cm wide and at least 0.50 m longer than the pavement width.

* Rules of proven accuracy, to be compared with all other rules used on site. They must be made of aluminum or steel with an appropriate length and rigidity.

* An approved immersion vibrator capable of transmitting vibrations to the concrete with a frequency of not less than 3400 pulses per minute.

Before pouring the concrete, the vibrating screed must be checked for proper operation and maintenance throughout the process. Particular attention must be paid to this requirement, as it may be necessary to redo a section that has not achieved the proper compaction required.

The Contractor must have all necessary minor tools and equipment to complete the work in accordance with these specifications. If night work is authorized, adequate lighting must be provided.

4. 2.- Concreting of curb and gutter slabs, culverts, etc.:

4. 2. 1.- Placing the concrete: Once the subgrade has been prepared in accordance with the provisions of these technical specifications, the moulds will be placed.

The alignment (or curve radii), thickness and levels of the slabs will be determined by the external molds of the same (according to the indications of the corresponding plans) and will be carefully verified before and after constructing the slabs.

Immediately after mixing, the concrete will be placed on the prepared surface. It will be spread as far as possible using channels across the entire width of the slab and to a thickness slightly greater than the height of the slabs.

4. 2. 2.- Compaction: Compaction shall be carried out using a tamping gauge, after vibration with an immersion vibrator as minimum equipment. Said tamping gauge shall be 10 cm wide, longer than the width of the roadway, and weigh between 10 kg/m and 15 kg/m.



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE".**

This tamper is built in such a way that, supported by the external molds, it must be the exact profile of the slab, which must remain unchanged and in optimal working conditions.

This tamper will be moved forcefully and quickly from the ends to compact the surface until a uniform, consolidated mass is obtained. This operation will leave an additional centimeter of concrete thickness. Once the tamping operation is complete, the tamper will be passed over again, swinging it crosswise to remove the excess concrete left over from the first operation.

The immersion vibrator must penetrate the concrete and be extracted vertically. Once the operation is complete, no gaps should remain at the insertion site. They must be inserted at uniform distances slightly smaller than the radius of the operating circle.

Concreting operations may be carried out using finishing machines.

They must be approved by the Inspection.

If for any reason the concrete structure obtained by vibration must be altered, it must be performed again (especially in the joint and edge areas).

Vibration shall not be permitted using a screed resting on concrete less than 48 hours old.

The slab thickness specifications must be adhered to at all points. Particular attention must be paid to the basins of storm drains, manholes, etc.

4. 2. 3.- Completion: Once the above operation is complete, small surface defects in the concrete, especially in areas adjacent to the curb forms and transverse joints, may be corrected using trowels. This is only done in exceptional cases and where extreme necessity exists and at the sole discretion of the Inspectorate.

The concrete surface will then be finished with transverse and longitudinal movements using a wool and rubber belt. It must be kept clean and periodically moistened. It will be handled from the sides, so its length will be greater than the width of the slab.

The first pass will be made when the free surface water disappears, oscillating it transversely about 30 cm with a small longitudinal advance. Before the initial setting of the concrete begins, the final pass of the belt will be made, oscillating only about 10 cm longitudinally.

Remember that the finishing work on the slabs where water will run off is intended to create a smooth surface.

No water will be added to the surface for finishing the concrete. Only if plastic cracking appears after finishing, may water be added in the form of a mist (atomized) to restore gloss until curing begins.

4. 2. 4.- Surface verification: After the final finish, the regularity and smoothness of the transverse and longitudinal profile will be verified by means of rules, which the Contractor must have on site and in optimal conditions.

Any irregularities noted must be corrected before the concrete sets. Otherwise, the raised surfaces must be removed with carborundum or a similar material. Smoothing the surface using a hammer, mallet, or other similar tool is prohibited. Depressions are not permitted.

The rule for controlling the cross-section profile must have exactly the shape of the specified gauge and a length greater than the width of the slab.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 “PAVING WITH Ho So IN CARLOS NEIGHBORHOOD PILGRIMS – 1ST STAGE”.

The rule for controlling the longitudinal profile must have a minimum length of three meters, be perfectly straight, and will be applied parallel to the longitudinal axis of the slabs.

4. 2. 5.- Duration of operations: The Inspection will reject the concrete at its sole discretion if more than 30 minutes elapse from the moment it is deposited until the end of the operations that have just been specified.

4. 2. 6.- Equipment for compacting and finishing the concrete: The Contractor must have the following equipment to compact and finish the concrete:

* A motor-driven finishing machine, of a model approved by the Inspection and equipped with a device to prevent oil or fuel from falling onto the concrete.

Two vibrators can be used as the minimum required equipment.

Immersion, approved, capable of transmitting vibrations to the concrete with a frequency of not less than 3400 impulses per minute and other suitable characteristics (at the sole and exclusive discretion of the Inspection)

* Two or more 3 m long rulers, made of appropriate and non-deformable material, straight or with curved gauge as appropriate.

* A two-handled ruler for longitudinally leveling the pavement at least 0.50 m greater than the width of the slabs and at least 0.15 m wide.

* Two long-handled wooden floats, with a blade measuring 0.80 m long and 0.45 m wide.

* Two wool and rubber belts, with two to four folds, no less than 20 cm and no more than 25 cm wide and at least 0.50 m longer than the width of the slabs.

* Rules of proven accuracy, to be compared with all other rules used on site. They must be made of aluminum or steel with an appropriate length and rigidity.

Before pouring the concrete, the vibrators must be checked for proper operation and maintenance throughout the process. Special attention must be paid to this requirement, as it may be necessary to redo a section that has not achieved the proper compaction required.

The Contractor must have all necessary minor tools and equipment to complete the work in accordance with these specifications. If night work is authorized, adequate lighting must be provided.

Art. No. 5: JOINTS

Concrete slabs will have joints of the types detailed below, the position of which will be determined according to the joint diagram specified in the plans. Any cases not covered in these technical specifications will be determined by the Inspection.

The placement of the pins must ensure perfect parallelism between them and the surface of the slab, as well as perpendicularity to the joint, for which the Contractor must take all necessary precautions.

The pins must be perfectly straight and respond to the corresponding planes.

In case the Contractor executes a section of slab and leaves the corresponding pins in place to continue with the concreting on another day (or when the



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE".**

Inspection requires it), you must provide the greased half of the pin immersed in the concrete in order to proceed with its replacement if necessary.

The Contractor must mark the location of the joints on the fresh concrete. Failure to do so or losing these marks for any reason will result in the immediate rejection, demolition, and reconstruction of the unmarked slabs, in addition to the loading, transportation, and unloading of debris and any other expenses incurred, with no further claim from the Contractor.

The execution of joints by sinking metal or other types of screeds into fresh concrete is expressly prohibited.

5. 1.- Transverse joints: Transverse joints shall be constructed at the distances established in the plans. They shall be of the expansion, contraction, and construction types, as indicated, and shall be executed at right angles to the slab axis, chords, and free edges.

5.1.1.- Expansion joints: These joints shall be provided at the ends of each block as standard, with no more than 100 meters between each one.

An easily compressible pre-molded sheet, 2 cm thick and as high as the slab thickness, with a length equal to its width, will be placed. This may be a pre-molded neoprene sheet (it must be placed with an adhesive material for adhesion to the concrete), or rot-proof softwood (poplar, for example), treated with creosote oil or similar to preserve it, immersed in water for no less than 48 hours before

Concreting begins. Before placing the concrete, the corresponding holes will be drilled for the dowels to be installed.

The end pins must be located 15 cm from the edges or longitudinal joint.

This joint will use smooth, round steel pins, 25 mm in diameter and 50 cm long, spaced 30 cm apart. Half of the pin must be greased and fitted with metal or hard plastic cartridges, the diameter of which must be slightly larger than that of the pins, to facilitate longitudinal movement within the structure, but without allowing lateral movement. Special attention must be paid to the specifications in the plans regarding cartridge dimensions, pin arrangement, etc.

The joint cavity above the laid sheet must be cleaned to a width equal to that occupied by the sheet itself to accommodate the sealing bitumen.

There should be no concrete left between the two sides of the joint, paying special attention when creating expansion joints in rows.

5. 1. 2.- Contraction joints: These shall be provided considering the distances between joints in equal sections not exceeding 4.50 m. They shall be of the simulated slot type with smooth, round steel dowel bars 25 mm in diameter, 50 cm long, every 30 cm. away, with one half of it painted and greased (not excessively), as indicated on the standard plan.

The end pins must be located 15 cm from the edges or longitudinal joints (in the case of paving slabs).

5. 1. 3.- Construction Joints: At the end of the daily work, or when concreting is interrupted for more than thirty (30) minutes, a "Construction Joint" will be built.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 “PAVING WITH Ho So IN CARLOS NEIGHBORHOOD PILGRIMS – 1ST STAGE”.

If the joint is due to an unforeseen interruption due to concreting, it must be located in the middle third of the slab and at least 1.5 m from any other joint, whether contraction or expansion. Furthermore, in this case, the dowels must be ribbed, 50 cm long, 25 mm in diameter, and spaced every 30 cm from each other and 15 cm from edges or longitudinal joints (in the case of paving slabs).

If the joint is for the completion of daily work, smooth, round steel pins measuring 50 cm long, 25 mm in diameter, and spaced every 30 cm between each other must be placed, with the end pins 15 cm from the edges or longitudinal joint (in the case of paving slabs).

5. 2.- Longitudinal joints (for pavement slabs): The position and number of longitudinal joints to be constructed will be indicated in the respective plans.

When a slab is to be built adjacent to an existing longitudinal free edge joint (Joint No. 7), it must be thoroughly greased prior to concreting.

The Contractor shall execute the longitudinal joints using a sawing machine.

5. 3.- Free edge type joints for slabs: These will be constructed in the cases provided for and specified in the attached standard plans.

5. 4.- Sawing of joints: The joints to the weakening plane, both transverse and longitudinal, must be executed by cutting a groove in the slab with a 20 HP to 30 HP and 3000 RPM to 4000 RPM motor saw mounted on a 4-wheel chassis and self-propelled.

The saws can be with abrasive material edges or with diamond-tipped edges.

The grooves must be cut with a minimum depth of 1/4 of the thickness of the slab and a width of 6 mm.

Sawing must be carried out in advance of the appearance of shrinkage cracks. The time elapsed between concreting and sawing the joints must be sufficient to allow the sawing machine to move without leaving any marks.

The manner of execution, the type and number of saws, as well as other requirements, must be such that they do not

cause concrete detachments and must be previously approved by the Inspection.

The Contractor must have as many sawing machines as it has work fronts, excessive in one unit, and the Inspection may require the Contractor to incorporate more units if, in its judgment, the pace of work so requires.

5. 5.- Bitumen for joints: Modified Asphalts with Flexible Polymers or other elastomers and adhesion improvers (for cold or hot application) must be used, with the following characteristics:

- remain flexible at low temperatures (-20 °C) and do not drain at 80 °C
- penetration at 25 °C (100 g – 5 seconds): 50-60 mm
- softening point: 50 °C-60 °C
- ductility at 25 °C: 60 cm.
- loss at 163°C, 5 hours, 50 g: not more than 1%
- penetration on residue at 25 °C, 100 g, 5 seconds: not less than 50% of the original penetration
- solubility in Carbon Disulfide (CS₂) not less than 99.5%



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 “PAVING WITH Ho So IN CARLOS NEIGHBORHOOD PILGRIMS – 1ST STAGE”.

- Flash point: not less than 240 °C
 - withstand traffic without being torn off even in very hot climates
 - resistance to the action of time and weather
 - resistance to permanent contact with diluted acids, fuels, oils and industrial and domestic waste water and
- comply with the Standards for horizontal joint sealants (ASTM D1190-75).

The Inspection may require the submission of samples (which will be extracted from the core of the drums and each must weigh at least 1 kg) and records of their use and the execution of tests by the Contractor.

5. 6.- Filling of joints: Once the concreting is finished and as soon as possible, the joints will be filled, following the following prescriptions:

- The joints must be completely dry and free of all foreign material, for which the Contractor must perform vigorous brushing and subsequent cleaning with compressed air.
- Any irregularities in the asphalt mastic housing must be repaired, but never with a hammer, sledgehammer, or similar tool, but rather with a saw grinder, etc.
- Prepared joints must be heated by means of a heat lance immediately before priming with a thin layer of fast-hardening diluted asphalt (if required by the characteristics of the sealant or determined by the Inspection), or pouring the asphalt sealant.

The mixing and pouring temperatures of the mastic must be strictly controlled, and the Contractor must have the necessary thermometers for this purpose.

If hot-applied bitumen is used, fusion must be carried out using an asphalt joint melter, with a **bain-marie heat transfer system and a thermostat**. Once the pouring point is reached, the material is poured to the top, allowed to cool, and smoothed. If necessary, subsequent pourings must be performed.

It must be filled

excess gasket and then cut off the excess material using a sharp steel tool.

The Contractor may propose other methods for the execution and taking of joints, which will be previously approved by the Inspection, which may require the presentation of records of their use.

Art. No. 6: CONCRETE CURING

After the finishing work of the concrete is completed, the concrete will be cured.

6. 1.- Curing methods: The curing method, as well as the materials and elements to be used in it, must be approved by the Inspection, who may request from the Contractor a detail of the characteristics of the materials to be used, background of their application on site and laboratory tests carried out on them, as well as any report it deems necessary.

Curing must be allowed at the edges of the slabs after removal from the mold.

6. 2.- Curing with waterproofing chemical products: Chemical products may be used and will be spread



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD PILGRIMS – 1ST STAGE".

on the surface of the slabs and will comply with IRAM standards No. 1675, 1664 and/or AASHO.M.148.

They should be applied when the surface gloss has disappeared using a curing bridge (lack of uniformity with a backpack) capable of applying it in the form of mist on the surface of the slabs.

The efficiency of the compound and the dosage recommended by the manufacturer will be constantly monitored.

Art. No. 7: CONCRETE CURBS

7. 1.- Generalities: The curbs may be concreted simultaneously with the slabs, or reinforced according to what is specified in the attached plans.

In the case of carrying out the work in two stages or "adding" cords in the missing places, it must be ensured that they do not come loose, by incorporating suitable anchors and/or specific products that function as an adhesion bridge.

(previously approved by the Inspection). The slab must first be thoroughly cleaned and **the joints** in it taken care of.

Before concreting, the necessary precautions must be taken to execute the cord joints, which must coincide with the transverse joints of the corresponding slabs, paying special attention to the expansion joints, ensuring their continuity.

The curb can be built immediately after the slabs are finished, by "combing" them as a bonding bridge. The molds that will form the upper part will then be placed, pouring the concrete into them, ensuring perfect fit and taking precautions to avoid altering the geometry of the concrete.

the road.

The concrete must achieve perfect accommodation by means of metal rods, vibrated or strongly compacted by means of special tampers, so that there are no gaps. The Inspection may, at its sole discretion, reject sections that present significant cavities. Once the molds have been removed, the visible part of the cord will not be retouched, but

only in very specific places and solely at the discretion of the Inspection with a mortar composed of one part cement and one part fine sand (1:1), with the incorporation of specific products that function as an adhesion bridge (approved previously by the Inspection).

The base of the curb will be executed on the edge of the slab, following the crown line of the latter.

The top of the cord will be smoothed by means of a float.

Before concreting the curb, wedges must be placed to provide access to the residential storm drain pipes above the roadway, respecting the corresponding diameters so that the pipe fits **without crushing or leaving gaps**.

The Contractor shall also carry out curb cuts and a perfect transition where there are vehicle entrances or ramps for disabled persons are planned, according to the Inspection's instructions. These works are not

will be considered as additional and in no case will give rise to any additional payment being claimed.



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE".**

7. 2.- Molds: The molds must be made of steel with a minimum thickness of 4 to 5 mm. Wooden molds are strictly prohibited. They must have a minimum length of 2.50 m, be free of warping or other deformation, and their dimensions and shapes must be such that they strictly respond to the profiles indicated in the plans.

They must have screwed or tongue and groove assembly to maintain alignment (vertical and horizontal).

Before use, the Contractor shall submit the molds for Inspection approval.

They must be firmly held in place using steel stakes, ensuring they do not shift or settle during concreting and finishing operations. If they need to be lifted, appropriate stakes (**not filled with earth or other similar material**) must be placed beneath the base of the forms to ensure proper support.

They will be clean, carefully and perfectly greased before starting the concreting.

The number of molds that the Contractor must have will be such that they can be left in place for at least eighteen hours after the concrete has been placed, or more.

time in case of cold weather, and solely at the discretion of the Inspection.

Once the molds have been removed, any gaps or niches that appear in the concrete must be immediately filled with a mortar composed of one part cement and one part fine sand and a concrete binding additive.

7. 3.- Concrete dosage: Since this is an element that is an integral part of the slab, the concrete to be used for the execution of the curbs will have the same characteristics as that which will be used to execute the slab. The Contractor may present a different dosage than for the slabs, which will be subjected to controls together with the test slabs (see section 2.6 of this section).

7. 4.- Joining existing curbs: Where the planned curb radius does not match the existing curb radius, the curb will be demolished to its nearest joint sufficient to construct the curb radius specified in the plans in its place. The cost of this work will be included in the unit price, unless the demolition and/or reconstruction of curbs is covered by other items.

Art. No. 8: RECEPTION OF CONCRETE SLABS:

8. 1.- Generalities: The reception of the concrete slabs will be carried out after verifying the gauge and condition of the surface, taking into account the joints and the thickness and resistance of the concrete of the slabs and underpinning with compaction around the entire free perimeter in order to avoid water accumulation in its vicinity.

The thickness of the concrete must be checked at all points, especially in the area around storm drains, manholes, etc.

Slabs may be accepted in full, or at a discount from the contract unit price, or rejected in whole or in part.

In the event that significant cracks are detected (considered as such at the sole discretion of the Inspection), the Inspection will require the demolition of the affected slabs, removal, loading, transfer of debris (to the places indicated), unloading and reconstruction of the same, removal of joints and execution of affected curbs and sidewalks in accordance with the Technical Specifications, and the Contractor may not claim any additional payment for these concepts.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD PILGRIMS – 1ST STAGE".

If slabs with minor cracks are accepted, they will be cleaned with a hook, brush and air injection. The bitumen sealant will be previously placed using a grinder at the depth deemed appropriate by the Inspection so that it binds well according to the filling. They must be sealed with a substance of recognized quality, with verifiable history in similar works and solely at the discretion of the Inspection. Cracked slabs will be paid between 50% and 75% of the value of contract.

In the event that for any reason inherent to the Contractor (demolding, sawing, traffic, vandalism, etc.) there is damage to the slabs or curbs (concrete detachments, joints with widths outside specifications, defective drainage housings, etc.), the Inspection, at its sole discretion, may apply reductions in the amount of the value to be certified.

between 25% and 50% of the contract value of the affected slabs or strands.

8. 2.- Determination of the thickness and strength of the concrete by slabs: These verifications will be carried out independently of other verifications that must be carried out.

The determination of the thickness and strength of the concrete in each slab will be determined by the core samples measured using a 15 cm diameter rotary probe (10 cm diameter probes may be used at the sole discretion of the Inspection) corresponding to the slabs to be verified.

Special care must be taken when drilling, packing, and transporting the test pieces to ensure that they do not suffer any impact that could damage them and significantly affect the test results.

The Contractor shall fill the holes left in the slab by the perforations within 24 hours of the extraction of the test specimens, using concrete with the same final characteristics as that used in the construction of the slab (but made with rapid-hardening Portland cements and concrete binding additives). They must be

Compacted in the same manner as standard specimens, the hole is covered with sheet metal or wood to ensure the surface is not affected by traffic or vandals. If the repair surface is not perfectly smooth or shows settlement, the Company must demolish and repair the hole properly.

Before beginning the coring process, the Inspection Department will establish a plan of the slabs to be cored, along with the location of each test specimen and the date of concreting. A copy of this plan will be delivered to the Contractor, who, through its Technical Representative, must verify the correct and timely coring process.

8. 3.- Core Extraction Equipment: The Contractor shall have a concrete core extraction machine mounted on a truck or suitable chassis in its work team. The machine shall be approved by the Inspection, which shall not allow the start of concreting until the Contractor has the extraction machine on site. The Contractor shall be solely responsible for the personnel, drill bits, fuel, etc. required for the operation of the machine.

jigsaw, as well as the costs incurred by packaging and freight required for sending the test specimens to the testing laboratory indicated by the Inspection, in each case.

8. 4.- Measurement of the witnesses:



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 “PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE”.**

- a)** The height of each witness (**Em**) will be equal to the average of four measurements. One will be taken along the witness axis and the other along the vertices of an equilateral triangle inscribed within a circle with a diameter of 10 cm. These measurements will be taken to the nearest millimeter.
- b)** The diameter of each core shall be equal to the average of four measurements. Two shall be taken two centimeters from the core faces, and the other two shall be taken three centimeters above and three centimeters below the midsection. These measurements shall be taken to the nearest millimeter.
- c)** The resistance of each sample in kg/cm² will be determined by compressive strength in a wet state, after keeping it submerged in water at 25 °C for 48 hours. These measurements will be made to the tenth and will be obtained by dividing the breaking load of the test piece and the cross-sectional area of the test piece obtained by the diameter measured according to the previous paragraph.
- d)** The resistance results obtained will be multiplied by the corresponding reduction factors (reduced to a slenderness equal to 2 and an age of 28 days), obtaining the concrete resistance value of the slab (**Rm**).

The slenderness reduction factors are obtained from the following table (where h is the height of the specimen, and d is its diameter):

h/d FACTOR h/d FACTOR h/d FACTOR h/d FACTOR h/d FACTOR

2.00	1.000	1.70	0.976	1.40	0.952	1.10	0.900	0.80	0.730
1.95	0.996	1.65	0.972	1.35	0.949	1.05	0.875	0.75	0.700
1.90	0.992	1.60	0.968	1.30	0.944	1.00	0.850	0.70	0.660
1.85	0.988	1.55	0.964	1.25	0.940	0.95	0.820	0.65	0.620
1.80	0.984	1.50	0.960	1.20	0.926	0.90	0.790	0.60	0.582
1.75	0.980	1.45	0.956	1.15	0.913	0.85	0.760	0.55	0.540
0.50	0.500								

The cores will be tested for compression at 28 days of age. In exceptional cases (at the sole discretion of the Inspection) where the cores cannot be tested at 28 days, they may be tested up to 35 days of age. After this period, the corresponding concrete **will be** rejected.

If new sample specimens must be extracted (after curing), they will be tested at an age that may not exceed 50 days under any circumstances. After this period, the corresponding concrete samples **will be** rejected.

The resistance obtained at the age of the test will be reduced to obtain the resistance at 28 days according to the following table:

Age FACTOR Age FACTOR Age FACTOR Age FACTOR Age FACTOR

In days in days in days in days in days

28	1.000	33	0.983	38	0.965	43	0.948	48	0.930
29	0.997	34	0.979	39	0.962	44	0.944	49	0.927
30	0.993	35	0.976	40	0.958	45	0.941	50	0.923
31	0.990	36	0.972	41	0.955	46	0.937		
32	0.986	37	0.969	42	0.951	47	0.934		

8. 5.- Conditions for acceptance or rejection of a slab: The acceptance of a slab will be carried out (regardless of other requirements that it must meet) considering at the same time the thickness Em and the resistance Rm of the concrete.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD PILGRIMS – 1ST STAGE".

The number $C = (E_m)^2 \times R_m$ will be determined, which will be called "load capacity of the slab" and $C_t = (E_t)^2 \times R_t$ (**theoretical load capacity**), where R_t is the required compressive strength (300 kg/cm²) and E_t is the required theoretical thickness.

Any slab that (through tests on open cores) does not meet any of the following requirements will be rejected, and the Inspection will order the demolition, loading, transportation and unloading of debris and subsequent reconstruction at the expense of the Contractor, without receiving any compensation for the expenses this may cause, nor any subsequent claim from the latter:

- 1) if the thickness (E_m) of the slab is less than (**$E_t - 1$ cm.**)
- 2) if the resistance (R_m) is less than **0.95 R_t**
- 3) if the C value is less than C_t

If the thickness (E_m) of the slab is between E_t and (**$E_t - 1$ cm**) or the resistance (R_m) is between R_t and **0.95 R_t** , and in addition the C value is greater than C_t (in either case), the Contractor must test a new perforated test piece (which is no less than one metre from the previously tested test piece, or from a joint or free edge), and the E_m , R_m and C values must exceed E_t , R_t , C_t , respectively. Otherwise, the slab will be rejected, and the Inspection will order the demolition, loading, transportation and unloading of debris and subsequent reconstruction at the expense of the Contractor, without receiving any compensation for the expenses caused by this, nor any subsequent claim from the latter:

The compression test may be performed if the 50-day period is extended, only in exceptional and duly justified cases and at the sole discretion of the Inspection (which do not include the lack of elements listed in point 8.6 of this article, or inherent to the laboratory); this test will be performed in the same way, applying the corresponding Factor for the reduction due to age, according to the following table:

Age FACTOR Age FACTOR Age FACTOR Age FACTOR Age FACTOR

In days In days in days in days in days

51	0,922	61	0,907	71	0,894	81	0,881	91	0,868
52	0,920	62	0,906	72	0,893	82	0,880	92	0,867
53	0,919	63	0,905	73	0,892	83	0,878	93	0,866
54	0,917	64	0,904	74	0,890	84	0,877	94	0,865
55	0,916	65	0,902	75	0,889	85	0,876	95	0,863
56	0,915	66	0,901	76	0,888	86	0,875	96	0,862
57	0,913	67	0,900	77	0,886	87	0,873	97	0,861
58	0,912	68	0,898	78	0,885	88	0,872	98	0,860
59	0,910	69	0,897	79	0,884	89	0,871	99	0,858
60	0,909	70	0,896	80	0,882	90	0,870	100	0,857

The Inspection will order the execution of all tests it deems necessary. If the Laboratory contracted for the present work is unable to perform a requested test, the Inspection will request the services of another Laboratory selected at its sole discretion. The costs incurred by these tests will be borne by the Contractor and will not be reimbursed.

8. 6.- Tests - elements: The methodology of molding or extraction, curing, testing, correction of results, etc., or in case of any doubt that may arise during the execution of the works, the CIRSOC 201 and IRAM 1666 and 1551 standards on ready-mixed concrete, curing conditions and witness testing will apply.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD PILGRIMS – 1ST STAGE".

The Contractor must provide the Inspection with the laboratory elements intended for obtaining samples and determinations to be carried out on site, namely:

- Suitable curing pools
- The jigsaw is available for extraction starting 14 days after concreting.
- 24 rigid metal molds (15 cm in diameter) for making cylindrical test tubes and rods for

Normalized compaction

- Inspection Assistant
- 3 complete Abrams cones and standard compaction rods
- buckets, trowels, digital thermometer and any necessary support elements.

It is important to note that the Contractor must have the necessary elements in a timely manner so that the test specimens are in condition to be tested.

In the event that test specimens cannot be extracted in a timely manner due to the lack of the elements stated, the Inspection may order the complete reconstruction of the section or area, at its sole discretion and without prejudice to applying the corresponding sanctions.

Art. No. 9: SUPPLEMENTARY PROVISIONS

9. 1.- Protection of newly constructed slabs: The Contractor is obliged to protect the concrete surface for which it will place the necessary and adequate barriers and fences surrounding the corresponding sector and will maintain sufficient security personnel to prevent access by vandals, pedestrian traffic, animals or vehicles, on

newly constructed slabs that are under curing, and that barriers and/or fences are not removed.

If any part of the slabs suffers damage for any reason before final acceptance, this will entail a discount of up to 50% of the optimal value of the slab, or the Contractor must remove and reconstruct it at its own expense (at the sole discretion of the Inspection and without further proceedings) and at its sole expense, including any other work or costs that this entails, without receiving any additional payment. The same applies to curbs (two consecutive joints constitute a minimum span). The same treatment will be given to slabs or curbs that are affected by rain.

If the slabs should crack as a result of premature traffic before they have been released to the public, the Contractor shall immediately remove the affected portion between two transverse joints and reconstruct it at its sole expense.

The Contractor must place the necessary signs and lights to indicate the detours to be followed and the places where traffic may be allowed.

When traffic needs require crossing, the Contractor shall have bridges or other suitable devices installed in the manner indicated by the Inspection to prevent damage to the concrete.

These protective barriers shall be arranged so that they do not interrupt or hinder longitudinal or transverse traffic at the locations where they are determined.

At night, beacons approved by the Inspection will be placed on the barriers and in all dangerous areas.



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE".**

9. 2.- Opening to traffic: Traffic on the slabs will be prevented before 28 days after construction or within a shorter period if so ordered by the Inspection, but never less than 14 days.

Test specimens prepared with the mix as it comes out of the concrete mixer and cured under the same climatic conditions as the slabs may be used, if so ordered by the Inspection, to determine the shortest time for opening to traffic. For this purpose, they will be tested using standard laboratory methods. If the results satisfactorily meet the corresponding requirements, the slabs will be cleaned, the joints filled and smoothed, and the slabs will be ready for circulation.

9. 3.- Steel for mesh, reinforcement or pins: The steel used for mesh, reinforcement and pins must meet the following minimum requirements:

- a) Tensile yield strength: greater than 2300 kg/cm²
- b) Tensile strength: greater than 3600 kg/cm²
- c) Elongation (% of break): greater than 20%/kg/cm²

9. 4.- Sand layer: Prior to placing the concrete and after the base has been approved, a layer of common coarse sand (if requested) will be placed on top of it, completely moistened.

Sand thicknesses of less than 3 cm shall not be permitted in any area of the box to be concreted, nor shall they exceed 5 cm. The indicated thickness shall be uniform across the entire width of the slab. The Contractor must adopt a work system approved by the Inspection to avoid abrupt differences in thickness within the concrete layer.

The sand shall be naturally silicate, composed of hard, clean, resilient, healthy grains without any adhering film, free of harmful materials such as dust, lumps, soft or flaky particles, alkalis, marl, clay, organic matter, or any other deleterious substance. If washing is required to achieve these conditions, the Contractor shall do so without any right to claim.

The percentage of harmful substances shall not exceed those listed below:

Harmful Substances Maximum Method

Material that passes through washing through the sieve

IRAM 74 microns (No. 200) 2% by weight IRAM 1540

Sulfates expressed as sulfuric anhydride 0.1% by weight IRAM 1531

Carbonaceous matter 0.5% by weight IRAM 1512

Clay lumps 0.25% by weight IRAM 1512

Other harmful substances (salts) shale clay, mica, soft fragments, etc.

2% by weight - - - The sum of harmful substances must not exceed 3% by weight - - -

Organic matter

Colorimetric index less than 500 ppm (lighter color than normal) IRAM 1512

Subjected to plasticity testing (IRAM 10502) it must be non-plastic.

Any sand subjected to the colorimetric test (IRAM No. 1512) to determine organic matter and that produces a darker color than the standard will be rejected.

The fine aggregate will be free of any reactive substance that may react harmfully with the alkalis contained in Portland cement (IRAM No. 1649).

It will comply with the following granulometry: The percentages in weight that pass through the square opening sieves or standard sieves will be the following:



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE".**

Sieves and Screens Percentage that passes

3/8	100%
10	90-100%
30	70-90%
50	50-75%
100	3-15%
200	0-3%

The grading in the table above represents the extreme limits that will determine whether or not it is suitable for use.

The grading of the sand from any deposit will be reasonably uniform.

If it comes from different sources, it will not be stored in the same pile, nor used alternately in the same construction or mixed, without prior written permission from the Inspection.

9. 5.- Placement of reinforcement mesh over pipes: In places where there are storm drain pipes, service crossings, some structure, etc. under the slabs, whose soil cover is less than 0.50 m, a reinforcement mesh must be placed, located on the neutral axis of the slab, formed by steel bars of 10 mm in diameter, separated by 0.20 m in both directions, located along the entire length of the pipes and with a width that is 2.00 m greater than the diameter of the storm drains or the width occupied by those corresponding to service crossings, etc.

If any sector of the work requires the execution of slabs that, due to their characteristics, must be H⁰A⁰, and are not specifically considered in any item, the Contractor must submit to the Inspection the corresponding calculation reports (signed by a professional qualified for this purpose and by the Technical Representative), and once approved by the Inspection, execute them at its own expense and cost, without further appeal.

9. 6.- Air-entraining agents: The air-entraining agent will be used if specifically established in this document and will be a chemical product of proven use in public works, which must comply with IRAM No. 1592 and/or ASTM C-260-69, and the amount of air to be intentionally incorporated will be 3.5% to 4.5% (IRAM No. 1602).

9. 7.- Connection with existing pavements: If there is a gap between the new slab and the existing one, a concrete slab with the same characteristics as the shotcrete will be constructed. The connection will be made by pre-sawing the existing roadway to regularize the section and achieve a uniform connection (including existing curbs). A type 4 joint will be constructed between the two slabs (according to the standard joint plan). The contractor must repair, at its own cost, any sidewalks damaged by this work.

If the free space is the result of causes inherent to the Contractor (demolitions carried out in order to execute or facilitate its work, or due to the transit of its machinery, etc., or due to lack of care or protection on its part, etc.), the joints must be carried out at its expense and cost, as well as any corresponding sidewalk repairs.

In case the existing pavement is made of concrete and does not have pins or the existing pins do not fulfill their function according to what was specified in due time



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 “PAVING WITH Ho So IN CARLOS NEIGHBORHOOD PILGRIMS – 1ST STAGE”.

In this regard, or if the sawing carried out has produced the elimination of the existing pins, the Contractor, at its own expense and cost, must first make the holes and place the corresponding pins according to the type of joint that it is about.

9. 8.- Personnel on site: The Contractor may not begin concreting work unless the Inspection confirms the presence of a minimum crew per site, consisting of three supervisors and seven assistants. The personnel assigned to perform these tasks must, in the Inspector's opinion, be sufficiently trained. Should the personnel not meet these capacity requirements, the Contractor may request an increase in the aforementioned personnel.

Personnel must have sufficient equipment to perform concreting tasks (hand shovels, etc.). The Contractor must also provide them with the necessary clothing (rubber boots, gloves, hearing protection, helmet, etc.) to ensure proper and safe work on site. If concreting tasks are performed during the summer, the Contractor must ensure the availability of drinking water for personnel.

If the Inspection determines during the execution of the concreting work that the Contractor does not have the specified minimum crew, it will suspend the placement of subsequent slabs and authorize the resumption of work once the minimum required personnel has been reinstated. If such personnel is not available, and the maximum waiting time between the placement of successive slabs has been exceeded, the slab will be returned to the waiting area. Repeated violations of this rule will subject the Contractor to the corresponding penalties for failure to comply with the Inspection's instructions.

9. 9.- Sampling of fresh concrete: .At least one settlement determination will be made for each batch incorporated into the work (at the sole discretion of the Inspection). If the test does not verify the specifications, the following will be carried out:

Carrying out a second determination, rejecting the money if a new negative result is obtained and accepting it if the requirements are met, for which the Inspection may request a new determination.

In no case will the approved dosage of the paste be permitted to be altered in order to adjust the settlement values (addition of water, cement, etc.).

For each slab incorporated into the work, the Inspection may order (at its sole discretion) the preparation of three cylindrical test pieces in accordance with the provisions of IRAM No. 1524, of which one will be tested on the days determined by the Contractor to request the opening of the slab to traffic, another after 28 days to determine the compressive strength, and the third will be reserved as a witness to be tested in case the latter does not comply with the requirements.

The responsibility for the preparation, transportation, curing and testing of the test specimens rests exclusively with the Contractor, and is not grounds for excuses for unsatisfactory final results.

The Contractor must provide one or more appropriately sized boxes, fitted with a lid and padlock, in which the test specimens will be stored on-site for the first 24 hours. They will then be transferred to the pool where they will be cured by immersion in lime-saturated water.



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE".**

The tests will be performed in recognized laboratories, which will be submitted for consideration and approval by the Inspection. All costs incurred for these tests, including sample collection, will be borne by the Contractor.

Art. No. 10: PORTLAND CEMENT

10. 1.- Use: Only approved brands that satisfy the quality conditions established in IRAM Standard 1503 will be used for the execution of the work.

10. 2.- Parking: To authorize the use of cement, and when it has not been stored in the construction warehouse, the Contractor must present to the Inspection, evidence that said cement has been stored in the factory for a maximum period of thirty days.

10. 3.- Storage: If it is necessary to store the cement on site, the Contractor must store it in a shed or enclosed area, well protected from moisture and weather. The bags must be stacked in layers on a wooden or similar floor at a level of at least 0.20 m above ground level, and the sides or piles must be at least 30 cm from the walls of the shed or enclosed area.

If there are no facilities for storing cement in closed premises and the importance of the work or the quantity of cement to be stored does not justify, in the opinion of the Inspection, the construction of a shed, the Contractor may use waterproof tarpaulins to cover the stored piles, which must be supported on a floor similar to that described above.

Portland cement of different types, factories, or batches shall be stacked separately. Storage must be done in such a way that it is easily accessible for inspection or identification of the different shipments.

The Inspection's approval of the storage procedure does not relieve the Contractor of responsibility for the quality of the cement.

Any barrel or bag of cement containing material that has lost its powdery state, even in small quantities, will be immediately removed from the work.

10. 4.- Mixture of cement of different brands and classes: Mixture of cement of different classes and brands or of the same class from different factories will not be permitted, even if they have been approved in the respective tests.

10. 5.- Extraction of samples and complementary tests: The Municipality of Olavarría reserves the right to carry out the cement tests it deems necessary, for which purpose the Contractor will deliver free of charge, when the Inspection so decides.

requires the quantity of cement necessary to carry them out. Samples will be taken from each of the collected items indicated by the Inspection and in the manner and time it determines, and the belongings to each item must be securely individualized.

The costs of extraction, packaging and transportation of the samples will be the sole responsibility of the Contractor.

Cement that has been stored in the workshop for more than 60 days may be retested if the Inspection deems it appropriate. Unsatisfactory results will lead to rejection and withdrawal of the corresponding batch.



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 “PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE”.**

Art. No. 11: WATER FOR PORTLAND CEMENT MORTARS AND CONCRETES:

The water used must not contain salts, oils, acids, organic matter, or any other substance harmful to Portland cement. Potable water may be used in all cases. If deemed necessary, the Inspection will arrange for water analysis. Sample collection, the containers in which they are collected, and their labeling must be carried out in accordance with the specifications of IRAM Standard No. 1601.

Water whose dissolved substance content is within the following limits will be considered suitable for filling and/or curing mortars and concrete:

Solid waste at 110 C, maximum: 5 g/l

pH, should be between 5.5 and 8.0

Sulfates, expressed as (SO₄), maximum: 600 ppm

Chlorides, expressed in (Cl⁻), maximum: 1000 ppm

Iron, expressed in (Fe⁺⁺⁺) maximum: 1 ppm

Total alkalinity, in CO₃Ca, maximum: 1200 ppm

Organic matter in O₂, maximum: 3 ppm

When the water analyzed exceeds any of the limits set above, it may also be considered suitable when the setting time values obtained with the cement paste prepared with suitable water do not differ by less (-) more than 10 % for the initial set and by more (+) more than 10 % for the final set and provided that the compressive strength test does not show a reduction greater than 10 % in the values obtained with the molded test pieces of the mixture prepared with the water under examination, with respect to those obtained with the test pieces prepared with the comparison mixture. When the results of any of the setting time and compressive strength tests do not agree within the limits set above, the water will be rejected.

Art. No. 12: FINE AGGREGATE

12. 1.- The fine aggregate permitted for use is that consisting of natural silica sand or sand resulting from the crushing of rocks and gravel, which have the same durability, wear resistance, toughness, hardness, and absorption characteristics as the coarse aggregate specified in Article No. 13. Preference shall be given to the use of natural silica sands. Rock or gravel crushing sands shall only be permitted if used mixed with natural sands with rounded particles, or if the concrete contains three percent or more of intentionally incorporated air in its mass. In both cases, the proportions shall be those necessary to obtain workable and homogeneous concrete. If this condition cannot be met, the use of crushing sands as the sole fine aggregate must be abandoned.

12. 2. The sand shall have clean, hard, resistant, durable grains, and shall be free of any adhering film, free of harmful amounts of dust, lumps, soft or laminar particles, alkalis, marl, clays, organic matter, or any other deleterious substance. If washing is required to achieve these conditions, the Contractor shall do so without any right to claim.

12. 3.- The percentage of harmful substances shall not exceed those listed below:

Harmful Substances Maximum Method



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE".**

Material that passes through washing through the IRAM sieve
74 microns (No. 200) 2% by weight IRAM 1540
Sulfates expressed as sulfuric anhydride 0.1% by weight IRAM 1531
Carbonaceous matter 0.5% by weight IRAM 1512
Clay lumps 0.25% by weight IRAM 1512
Other harmful substances (salts) shale clay, mica, soft fragments, etc. 2% by weight -

The sum of harmful substances must not exceed 3% by weight - - - Organic matter Colorimetric index less than 500 ppm (lighter color than normal) IRAM 1512

12. 4.- Subjected to plasticity test (IRAM 10502) it must be non-plastic.

12. 5.- All sand subjected to the colorimetric test (IRAM No. 1512) to determine organic matter and which produces a darker color than the standard, will be rejected, unless it satisfies the resistances specified for mortar in 12.9 of this article.

12. 6.- Granulometry: The sand will be well graded (from coarse to fine), with a fineness modulus greater than 2.30, and when it is mechanically analyzed using IRAM No. 1501 sieves, it must satisfy, unless otherwise indicated, the following requirements:

Material passing the IRAM sieve %

9,5 mm (3/8") 100
4,8 mm (N° 4) 95-100
2,4 mm (N° 8) 85-95
1,2 mm (N° 16) 65-85
590 ÿ (No. 30) 25-50
297 ÿ (No. 50) 4-10
149 ÿ (No. 100) 0-5

12. 7.- The grading in the table above represents the extreme limits that will determine whether or not it is suitable for use. The grading of sand from any deposit will be reasonably uniform and not subject to the extreme percentages or limits of the specified granulometry.

12. 8.- Fine aggregate from the same deposit that has a fineness modulus that differs by 0.20 from the fineness modulus of the representative sample initially submitted by the Contractor, but within the limits of 12.6 of this article, will be rejected and may only be accepted if the Contractor proposes a new dosage formula.

Fine aggregate from different sources shall not be stored in the same pile, nor used interchangeably in the same type of construction or mixture, without prior written permission from the Inspectorate.

12. 9.- Mortar strength: The fine aggregate, when performing the mortar strength test (IRAM 1534), will provide a compressive strength at the age of 7 and 28 days, of at least 90% of that developed by the mortar of identical proportions and consistencies, prepared with the same cement and sand that meet the specifications and with a fineness modulus equal to the sand under study.

12. 10.- Durability: When the fine aggregate is subjected to five cycles of the durability test (IRAM No. 1525) with the sodium sulfate solution, the percentage of weight loss will not exceed 10%. If the fine aggregate fails this test, it will be



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE".**

It will only be used if, when subjected to the freezing and thawing test (IRAM No. 1621), it gives a satisfactory performance result.

12. 11.- The fine aggregate will be free of any reactive substance that may react harmfully with the alkalis contained in the Portland cement (IRAM No. 1649).

12. 12.- Once the fine aggregate has been subjected to wet and dry granulometry on sieve No. 200, more than 80% of the fine aggregate that passes through the wet method must pass through the dry method.

Art. No. 13: COARSE AGGREGATE

13. 1.- Maximum size of coarse aggregate: It must retain a 51 mm (2") sieve between 5% and 10% for slabs with a thickness between 18 cm and 25 cm. For slabs of lesser thickness, the maximum size must be 1/3 of the thickness of the same.

The coarse aggregate will be that which comes from the crushing of rocks, washed gravel or crushed gravel, composed of pieces or particles retained by the IRAM 4.8 mm sieve (No. 4), hard, resistant and durable, without excess of elongated particles and free of any harmful amount of layers or adhered particles, and must satisfy in all aspects the requirements detailed in the following paragraph.

13. 2.- The percentage of harmful substances found in the coarse aggregate will not exceed the following values:

Harmful Substances Maximum admissible Method

Coal 0.50 IRAM 1512

Lightweight particles in aggregates 0.50 ASTM C 123

Clay lumps 0.25 IRAM 1512

Soft fragments 2.00 ASTM C 235

Friable particles 0.25 ASTM C 142

Loss due to washing on IRAM 74 \ddot{y} sieve (No. 200) 0.80 IRAM 1540

Soluble salts 0.50 IRAM 1512

Sulfates expressed as sulfuric anhydride 0.07 IRAM 1531

Other harmful substances (slate, mica, friable flakes or particles covered by harmful films)
1.00

13. 3.- The sum of the percentages of harmful substances shall not exceed 3% by weight.

13. 4- The cubicity coefficient of the coarse aggregate must be greater than 0.60 determined according to the test of IRAM Standard No. 1681.

13. 5.- Once the aggregate has been subjected to the accelerated durability test (IRAM No. 1525), it must not show signs of disintegration after 5 cycles and must not experience a loss exceeding 10%. If this test fails, the aggregate may only be used if it satisfactorily withstands the freeze-thaw test (IRAM No. 1526) and must not show disintegration after 5 cycles.

13. 6.- The "Los Angeles" Wear (IRAM No. 1532) must be less than 35%, and must meet the requirement of hardness uniformity, so the Wear between 100 and 500 turns must respond to:

0,2

500

100

Wear turns



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE".**

Wear laps

13. 7.- The absorption of coarse aggregate by immersion in water for 48 hours must be less than 1.2% (IRAM No. 1533).

13. 8.- The coarse aggregate must be free of substances that may react harmfully with the alkalis of Portland cement, as well as its impurities.

13. 9.- The coarse aggregate (gravel) must come from fresh rock, considering as such, those whose mineral elements have not undergone a process of chemical decomposition, with the consequent detriment of their physical properties.

Only gravel will be admitted which, when tested according to the methodology established in IRAM STANDARD No. 1702, shows:

1) Decomposed rock (very advanced and/or friable alteration, maximum 3%).

2) Semi-decomposed rock (degree of alteration that already begins to affect the physical state and/or low cohesion or exquisite maximum 6%).

3) Sum of the percentages of 1 and 2 = 6% (maximum).

13. 10- The rock for gravel must have a compressive strength equal to or greater than 800 kg/cm² (IRAM No. 1510).

13. 11.- The Rock Hardness by rubbing will be equal to or greater than 18, when determined by testing with the DORRY machine (IRAM No. 1539).

13. 12.- Tenacity must be:

a) From rock to stone equal to the greatest of 12 cm. (IRAM No. 1,538).

b) For gravel S/ AASHO T-6-27 it should not reveal faults.

13. 13.- Coarse aggregate for stockpiling and dosing shall be subdivided into two fractions approximately equal to half the maximum size. If the granulometry of the separated fractions on the sieves indicated in the formula varies by more than 20% between sieves with respect to the average, the Contractor shall subdivide said stockpile at its sole expense.

13. 14.- At the time of using the coarse aggregate, it must be in a state of cleanliness similar to the representative sample of the proposed dosage; otherwise, it must be washed by the Contractor, at its sole expense.

13. 15.- Granulometry: The sizes indicated for the coarse aggregate and its mechanical analysis carried out with IRAM sieves No. 1501, must meet the following requirements unless otherwise indicated in the Complementary Specifications:

Corresponding environments = Retained

Tamices: 2" 1 ½" 1" ¾" ½" ¾" N° 4

Samples:

1-3 0 0 0-10 - 40-75 - 97-100

3-5 5-10 40-65 90-100 - 100 - 100

Mix:

50% 1-3 2,5-5 20-32,5 45-55 - 70-87,5 - 98,5-100

50% 3-5

The mixture values correspond to environments for 1-5

13. 16.- The two fractions mentioned above will be combined in such a proportion that the minimum number of voids in the mixture is obtained with a quantity of at least 50% of fraction 3 to 5.



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE".**

Art. No. 14: HIGH MODULUS POLYPROPYLENE FIBERS

If it is specifically specified that high modulus polypropylene fibers be added to the concrete, they must meet the following conditions:

- DENSITY: ----- 0.90 gr/cm³
- BEAM LENGTH: ----- 52 mm
- MELTING POINT: ----- 160 °C
- Flash point: ----- 390 °C
- WATER ABSORPTION: ----- less than 0.01%
- TENSILE STRENGTH: ----- 0.5 to 0.7 KN/mm²

Art. No. 15. INTERLOCKED PAVEMENT OF CONCRETE PAVING STONES

The construction of this type of pavement is based on the use of uniform, solid concrete elements, called paving stones, which are placed side by side and, due to lateral contact through the material filling the joint, allow frictional load transfer from the receiving element to all its adjacent elements, working together and with the possibility of individual dismantling. This type of pavement behaves like a flexible pavement while simultaneously enjoying the qualities of concrete. The interlocking or interlocking system of the paving stones prevents horizontal displacement in braking zones or tight curves. The texture of the formed pavement has non-slip characteristics, preventing the risk of vehicles slipping on wet surfaces, and is a natural speed limiter, making it especially suitable for residential areas. The possibility of dismantling or unlocking the paving stones individually facilitates the operations necessary for the installation of any underground connection, reusing the same paving stones.

15.1: Type of paving stones

For the construction of articulated pavement, 8cm Type I Holland paving stones will be used. These are used for paving roads on public roads, without prejudice to their use for any other purpose, for example, airports, loading yards, etc.

Compressive strength value:

Average value greater than or equal to 45 Mpa Individual value greater than or equal to 40 Mpa

15.2: Preparing the base

This work involves clearing the land down to the foundation level, eliminating any topsoil or unsuitable soil, replacing it with Type I (tumble) soil if necessary, and eliminating any type of water. This may involve removing soil below the planned elevations and replacing it with other soils, adding lime, or any other work that will allow the operation to be carried out satisfactorily.

The Contractor will not receive any additional payment for any remediation work, including the provision of materials.

15.2: Cement floor



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVING WITH Ho So IN CARLOS NEIGHBORHOOD
PILGRIMS – 1ST STAGE".**

For the construction of a base of cement soil, the thickness of the base will be at least 15 cm, with a design to satisfy a mechanical resistance of 20 kg/cm², with satisfactory durability when dry and wet, minimum cement content of 110 kg per m³, a minimum dry density equal to 100% of T99, maximum swelling of the soil mixture without cement 1%; with mixing uniformity in the plant and a maximum time lapse of 3 hours from humidification to the end of compaction; minimum curing of 48 hours or asphalt irrigation of 0.5 lts./m² at the end of compaction.

The materials to be used in the construction of the Base and sub-base will meet the following requirements:

The soil to be used will be calcareous deposit soil provided by the Contractor, approved by the Inspection corresponding to classification A2-4 of the HRB classification, which will meet the following conditions:

It shall not contain more than 2% by weight of waste, plant or animal remains, industrial or domestic waste, or materials in the process of decomposition.

It will not present a plastic index greater than 8%, it will present a relative support value CBR greater than or equal to 90%. The support values will correspond to the minimum densities required for 100% compaction of the base and subbase, relative to the maximum dry density obtained in the Proctor T99 test.

15.3: Arena

15.3.1: Sand bedding layer

The basic purpose of this layer is to serve as a base for laying the paving stones and to provide material for sealing the joints underneath. It must be carefully spread and leveled to achieve a layer of uniform thickness, since the pavement is only compacted once the paving stones have been laid. A leveling screed with longitudinal guides can be used for this purpose.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

The sand layer should be uniformly layered between 3 and 5 cm after the tread layer has been vibrated and compacted. The loose layer should therefore be around 6 and 7 cm thick. The sand should be coarse, with a grain size of 2 to 6 mm, with no more than 3% organic matter and clay, and maintain a uniform moisture content. Once the sand is leveled, it should not be stepped on. The paving stones should be laid as the sand is spread, ensuring that it remains uncovered for as little time as possible.

15.3.2: Sand for sealing joints.

Once the paving stones have been laid, separated from each other by the spacers, they are compacted, sealing the joints between the units from bottom to top. The sand is then swept across the surface with fine sand or sealing sand. This sand must be as fine and dry as possible to completely fill the joints, confining the paving stones laterally and transmitting vertical loads between them. It must be free of contaminants or soluble salts to minimize the presence of efflorescence.

When excessive humidity in the environment prevents proper sealing, intentional and accelerated drying of the sand will be necessary, and then keeping it stockpiled and covered.

15.4: Confinement edges, concrete ramps and pedestrian paths.

Interlocking concrete paving stones require edges that confine them laterally to prevent shifting of the paving stones, excessive joint openings, or loss of bond between them. Confinements are provided by curbs, gutters, edge beams, concrete slab edges, concrete gutters, metal profiles, etc., as appropriate.

In the case of inspection chambers, drains, or other services, a concrete frame must be built around the chamber openings as a means of containment.

All concrete elements shall have the specified strength for the curbs.

Before laying the paving stones, all confinements must be carried out.

Art. No. 16. CONFINEMENT BEAM.

If containment is required, it will be built using a 0.30 m high and 0.15 m thick retaining beam, reinforced with four size 8 iron bars and 4.5 m iron stirrups every 15 cm. The filler will be H-21 concrete.

GENERAL TECHNICAL SPECIFICATIONS FOR HYGIENE AND SAFETY - OCCUPATIONAL MEDICINE

Art. No. 1: WORK CONDITIONS AND ENVIRONMENT - CURRENT REGULATIONS TO BE COMPLIED WITH DURING THE EXECUTION OF THE WORK

The Contractor shall take all necessary precautions to avoid any type of damage to persons or property of any kind, including property facing the route of the work, being solely and exclusively responsible for compensation for any damages and losses caused to them by the work and/or its employees.

The contractor will be responsible for compliance with the laws, decrees, provisions, ordinances, and regulations of national, provincial, and municipal authorities in force at the place where the works are being carried out, as well as for paying any fines that may be imposed for violations of these laws.

The Contractor shall arrange (if necessary) for the intervention of experts, at its own expense, to correct any defects in the works during the execution and completion of the works, in such a way as to:

* Ensure the safety of all persons entitled to be in the work area and keep the work area in a state of order that prevents any danger to such persons.

* Provide and maintain at its own expense all lights, guards, fences, danger signs and surveillance when and where necessary and/or required by the Works Inspectorate or any duly constituted Authority, for the protection of the works or for the safety and convenience of any person.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

* Take all necessary measures to protect the environment, both inside and outside the work site, to prevent damage to people and/or public property as a result of noise pollution or other causes arising from their work methods.

* Reduce environmental impacts in accordance with the Contractual Technical Specifications.

The Contractor is obliged to comply with all provisions of the Laws on Work Accidents and on Health and Safety and their Regulations (Law 19587/72, Regulatory Decree 351/79, Resolution 1069/91, its modification by Decree 911/96 dated 5/8/96 (on Health and Safety conditions in the Construction Industry), and the provisions of Resolution of the Superintendence of Labor Risks No. 231/96 (Official Gazette 27/11/96), the Law on Labor Risks No. 24557, annexed and amended, and all other provisions issued on the matter until the final acceptance of the work. Likewise, it will be responsible for any accident that occurs to its personnel, assuming the obligations arising from it, in accordance with the provisions of the aforementioned legislation.

Before the start of the work, the Contractor is required to submit proof of registration of all personnel, both administrative and manual, to be employed on the project, in an ART issued by a company approved by the Inspection.

Art. No. 2: CURRENT REGULATIONS

ARTICLE 9, CHAPTER 1, REGULATORY DECREE No. 911/96: "Employees must adapt the facilities of the works that are under construction and the remaining work areas of their companies, to the provisions of Law No. 19587, and these regulations within the time limits and conditions that the SUPERINTENDENCY OF OCCUPATIONAL RISKS will establish for this purpose."

ARTICLE 17, CHAPTER 3, REGULATORY DECREE No. 911/96: "The Employer will be responsible for allocating the number of monthly professional hours that, based on the number of workers, the category of the activity and the degree of compliance with the specific rules of this regulation, correspond to each

establishment. The guidelines for this determination will be established by the SUPERINTENDENCY OF OCCUPATIONAL RISKS.

The employer must provide for the assignment of Health and Safety technicians, with a qualifying qualification recognized by the competent authority, based on the needs of each establishment, as assistants to the officials mentioned in Article 16.

ARTICLE 20, CHAPTER 4, REGULATORY DECREE No. 911/96 indicates generalities on the content of the technical file of Hygiene and Safety that must be complemented with the prevention guidelines necessary for the fulfillment of the functions of the Hygiene and Safety services. ANNEX I, ARTICLE 1.- (REGULATORY OF ARTICLE 9, CHAPTER 1, REGULATORY DECREE No. 911/96): "

The

basic health and safety conditions that must be met at a construction site from the outset are as follows:

- a) Installation of adequate bathrooms and changing rooms.
- (b) Provision of drinking water.
- c) Construction of camp infrastructure (if necessary).
- d) Have appropriate vehicles for transporting personnel (if necessary).
- e) Delivery of all personal protective equipment for the time of the work in question, according to the existing risks, with the exception of work clothing.
- f) Implementation of the Health and Safety Service and the preparation of the Technical File.
- g) Development of a Health and Safety Training program and implementation of initial basic training for personnel in this area.
- h) Implementation of preventive measures to protect against falls of people or collapses, such as the installation of railings, fences, signage, screens, sub-walling or sheet piling, as appropriate.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

i) Provide electrical circuit breakers or grounding, depending on the risk to be covered, in the panels and installed machinery. Wiring must also be carried out with double insulation.

j) Installation of a three-class ABC chemical powder extinguisher, with a capacity of ten kilograms.

k) Protection of the drives and transmission systems of the installed machines.

Then, as the stages of the work are carried out, the provisions of Decree No. 911/96 must be complied with and in particular the following deadlines must be met:

After seven days:

l) Delivery of work clothes.

After fifteen days:

m) Complete basic training in Hygiene and Safety for staff.

n) Install safety signs on site.

o) Designate a suitable location for use as a staff dining room.

p) Complete fire protection.

q) Adapt the order and cleanliness of the work, designating safe and obstacle-free access, circulation and ascent sectors, if applicable."

ARTICLE 2.- (REGULATORY OF ARTICLE 17, CHAPTER 3, REGULATORY DECREE No. 911/96)

Considering the inherent risk, the number of personnel, and the simultaneous work fronts that may occur on construction sites, the weekly professional assignment hours are established according to the following table, regardless of whether the Health and Safety Service is internal or external.

Number of Operators Weekly Professional Hours

1-15 from 3 to 5

16-50 from 5 to 10

51-100 from 10 to 15

101-150 from 15 to 20

151 or more 30 or more

As a complement to the professional obligations, a reference is attached for the incorporation of Health and Safety Technicians. For jobs exceeding 50, the professional in charge of the Health and Safety Service will determine the number of technicians required and the allocation of professional hours, taking into account the complexity of the project, workloads, number of personnel exposed to risk, etc.

The tasks to be performed during the scheduled hours will be those stipulated as obligations in Chapter 3 of Decree No. 911/96.

ARTICLE 3.- (REGULATORY OF ARTICLE 20, CHAPTER 4, REGULATORY DECREE No. 911/96)

Regardless of the requirements established in Article 20 of Decree No. 911/96, the Technical Work File must be completed with the following:

a) Descriptive report of the work.

b) Program for the prevention of occupational accidents and diseases according to the risks anticipated at each stage (to be completed with plans or diagrams if necessary).

c) Staff training program on Health and Safety.

d) Record of assessments carried out by the Health and Safety service, where visits and measurements of contaminants will be recorded.

e) Organizational chart of the Health and Safety Service - Occupational Medicine.

f) Plan or diagram of the workshop and auxiliary services

Pursuant to Title II - Chapter 4 - Article 39 of Decree No. 351/79 regulating Law No. 19587, the Service

of Hygiene and Safety at Work, will prepare and maintain an updated Technical File, which will contain at least and according to what is specified in Resolution No. 1069/91 of the Ministry of Labor and Social Security, the following:



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

- a- Descriptive report of the work, with an analysis of potential emerging risks by stage of construction. This will be complemented with plans, diagrams, and explanatory schemes.
- b- An occupational risk prevention program by stage of work, which identifies:
 - * Measures to prevent occupational accidents and diseases.
 - * Technical-explanatory report that includes the Standards to be applied for each risk.
 - * Staff training program, at all levels, indicating duration and system to be used.
 - * Protective elements and equipment provided according to the risks
 - * Periodic assessments of physical and chemical environmental risks.
 - * Plan or diagram of the workshop and its services.
 - * Infrastructure for construction services, drinking water, sewage disposal, lighting, access, fire protection, etc.
- c- Organizational chart of the Occupational Health and Safety Service.
- d- Organizational chart of the Occupational Medicine Service.
- e- Verify compliance with current Municipal provisions for the execution of works on public roads.

GENERAL TECHNICAL SPECIFICATIONS FOR ENVIRONMENTAL CONTROL

Art. No. 1: DESCRIPTION:

It basically includes the Control and Protection of the Environment in accordance with the Laws, Decrees, Resolutions and Provisions (National, Provincial and Municipal) and requirements of the contractual documentation, in order to ensure the safety of people with the right to be in the work areas, keeping them in a state of order that avoids any danger to them; providing and maintaining (in a timely manner)

All necessary elements for the safety of all persons; take all necessary measures to protect the environment inside and outside the construction site; and eliminate or reduce negative environmental impacts during the execution of the works (accumulation of materials on public roads; interference with pedestrian and vehicular traffic; noise; generation of dust, gases, and/or toxic fumes; overflowing of absorbent wells; risks to the population and surrounding buildings due to deep excavations; deforestation, flooding, etc.), in full accordance with the programs set forth in the Mitigation Plan.

Art. No. 2: MITIGATION PLAN:

2.1.- Objectives: Its purpose is to indicate the necessary actions to be carried out in order to reduce the negative impacts caused by the execution and operation of the work.

Mitigation works will be carried out within the timeframes required by the degree of progress of the works; therefore, no chronological mitigation plan is established; they will only be carried out based on specific actions.

2.2.- Construction stage:

Mitigating measures - Impact control

General: Personnel directly involved in the construction site and with decision-making authority in the Contractor's area of construction must be instructed on compliance with municipal ordinances and regulations regarding the environment and health, particularly in areas such as noise pollution, sewage spills, existing forestry, etc., in relation to their actions in the area. In this regard, and as general standards that may or may not be included in current legislation, the following must be observed:

a) In the case of using branches, trunks, or rough sawn wood for secondary purposes to the construction itself, they must not come from existing urban forestry, unless authorized by the Inspection, and come from specimens extracted or to be extracted from the work area.

b) Maintenance operations on road machinery, transport, etc., that generate potentially polluting waste, containing, for example, grease, mineral oils and other petroleum derivatives, must be carried out in such a way that they do not come into contact with the ground or



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

surface or groundwater, disposing of it with other hazardous waste. These operations should be carried out in the workshop if possible.

c) If necessary (and solely at the discretion of the Inspection), the concrete production plant will be equipped with systems to control the emission of pollutants into the atmosphere, including particulates, during its operation.

d) Bituminous solid waste generated by the operation of the concrete production plant, by the paving itself and by road machinery maintenance operations must be prevented from coming into contact with the environment.

e) Stabilized solid waste from the removal of obsolete binders and unused aggregates should not be randomly disposed of anywhere. The best practice is to collect them in a single location and then load, transport, and unload them at the locations indicated by the Inspection.

2.2.1.- Material Storage: Materials to be used in construction, particularly those that, due to their particle size, could disperse into the environment, must be arranged in such a way that their storage method prevents this from happening.

It will be necessary (avoiding affecting the quality of the material to be used), to proceed with compaction and/or coverage or another mechanism that ensures minimum dispersion.

2.2.2.- Surface Drainage: Temporary drainage must be adequately provided during the construction phase to prevent the formation of barriers that impede runoff. This will prevent the unnecessary accumulation of rainwater, which can cause salinization or erosion problems.

2.2.3.- Disposal of solid waste generated during the construction stage: Containers must be provided for waste generated during the construction stage, in order to prevent it from being dispersed into the environment, also avoiding the proliferation of insects and rodents. This waste must be removed

periodically for final disposal.

In addition, the storage of waste such as oils, fuels and hydrocarbons in general, produced during the work, must be considered for later disposal or recovery.

2.2.4.- Disposal of sewage waste from the construction site: Sanitary latrines, chemical toilets, or other types of equipment must be installed to prevent the aggravation of the contamination of the waters in the area by the contribution of wastewater from the construction site.

2.2.5.- Soil destruction: Soil destruction due to earth movements will inevitably occur; mitigation of the effects is not considered possible. Any discovery of archaeological and/or paleontological heritage objects should be reported immediately to the competent authorities.

2.2.6.- Landscape destruction: The Contractor shall be responsible for the care of any trees and plants that must remain in place. The Contractor shall take the necessary precautions for their preservation and shall bear the costs involved. Any tree species removed must be replaced with two new specimens, in accordance with the provisions of section 2-3-1 below.

2.2.7.- Community Relations Plan: It is of fundamental importance to keep the population where the work will be carried out and the transversal arteries that serve as alternative routes informed about the construction activities of the project, in order to reach a consensus on the possible inconveniences and inconveniences that the construction of the work could cause, such as: interruptions in the supply of electricity, drinking water networks, telephone service, etc., breakages and obstruction of streets and accesses, etc. and also to avoid possible accidents due to the increase in traffic in the area, particularly heavy traffic and road machinery.

2.2.8.- Information to the personnel who will work on site: A list of conducts to be followed by the construction personnel must be implemented and instructed, in order to avoid possible personal and environmental accidents due to:

- unnecessary generation of waste.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

- Spills of liquid and/or solid substances into the environment, such as hydrocarbons and construction materials, which may primarily affect the course of existing open and piped drains throughout the area.

In particular, materials that could cause obstructions in the pipes in the construction area or downstream should not be dumped.

2.2.9.- Alterations in infrastructure services: When power outages are necessary, a community information system must be provided in advance so that they know the dates and times of such power outages. Even if there are alternatives in the works to supply electricity from another sector to the areas

included in the cut.

2.2.10.- Location of the Workshop in the Area: Taking into account the prevailing winds in the area, special care must be taken regarding the location of the workshop, which must be located as far away as possible from the urbanized area, to avoid possible disturbances due to noise and dispersion of materials.

2.3.- Operation stage Mitigation measures - Impact control

2.3.1.- Air Quality - Forestation

2.3.1.1.- Air Quality: In order to reduce the effect of the impact caused by the variation in air quality, the new layout must be forested (if specifically specified).

2.3.1.2.- Forestation: The screeds and forestation must take into account the characteristics of the subsoil resulting from the works (presence of pipes, shallow-depth piping, etc.).

Some combination of deciduous and evergreen trees should be planted to ensure adequate leaf cover throughout the year. Planting should be done to minimize the need for periodic pruning due to power line obstruction. It is advisable to quantify the available space for forestation and landscaping.

The suggested species are those that will be specified in the specific technical conditions. Their height, measured from the base of the trunk to the first branch fork, will be between 1.70 m and 2.00 m. The planting methods, in terms of distance between specimens will be in the order of 5 m, but may be modified to less, according to the unique features of each case. The specimens will be placed in their final location using the techniques and techniques usual in this type of operation.

The plans will be approved by the Inspectorate before implementation, and their quantification in terms of the number and species to be implemented, as well as their final spatial location, will be determined.

2.3.2.- Noise: There will be a significant increase in vehicular traffic, which will lead to increased noise levels in the areas covered by the new route. Therefore, road signs and the installation of speed-reducing devices are necessary to ensure that the established maximum speed limits are not exceeded.

At the same time, this will lead to a lower incidence of traffic accidents.

The expected final noise levels will be comparable to those found in different sectors of the city, which have similar traffic densities.

2.3.3.- Surface hydrology The absorption of rainwater by the ground in the transformed area will be very low; this will translate into an increase in the flow in the drainage channels.

2.3.4.- Landscape alteration: There will be an alteration of the landscape in the area when it is transformed. Tree planting will be required as specifically indicated throughout the construction area, which will improve the landscape, reduce noise levels, and decrease carbon monoxide levels produced by vehicle traffic.

We can say that, for the residents of the area, after the completion of the work, the area will be in a better state of hygiene than it is currently.

2.3.5.- Community Relations Plan: The operation of a high-traffic street in a sector where there was no previous layout or traffic density was very low will require certain requirements for its integration into the community.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

In addition to necessary infrastructure works and as specifically indicated, some form of road safety education must be carried out to prevent behaviors that could lead to traffic accidents, such as leaving animals loose, children playing in exposed areas, driving in animal-drawn vehicles, etc.

Art. No. 3: MONITORING

Environmental parameters that may cause significant negative impacts must be controlled, according to the analysis of the matrices for the construction and operation stages, the list of which is transcribed below, duly discretized into the "Construction and Operation" stages.

3.1.- Construction stage

Generalities:

- a) The Contractor and its personnel must strictly comply with the National and Provincial Laws, Municipal Ordinances and provisions and Police Regulations in force during the execution of the work.
- b) Cleaning of the Work: The Contractor shall keep the work free of waste and shall clean it periodically. The Inspection may require this at any time at its sole discretion. Once completed, the work must be delivered free of debris or waste materials and in perfect hygiene and safety conditions.
- c) Workshop: The verification and/or approval of a workshop by the Inspection does not exempt the Contractor from compliance with the standard and/or authorization process before other organizations regarding building, health or safety regulations, so that its operation does not cause inconvenience to third parties.
- d) Security, surveillance, signaling and protection measures: The Contractor must have continuous surveillance of the works, in order not to cause harm to people or property, must illuminate the excavations or obstacles at night and mark them, day and night. Likewise, all appropriate protective measures must be taken to avoid accidents and the necessary shoring must be carried out to prevent collapses or safeguard the stability of buildings or structures.
- e) Disruptions to vehicle and/or passenger traffic: The Contractor shall take all necessary measures to minimize disruptions to vehicle and passenger traffic. In cases where this is essential, all necessary daytime and nighttime signaling measures shall be adopted to warn and guide vehicle traffic and prevent accidents.

3.1.1.- Air quality: Monitoring must be carried out every 30 days to determine the levels of settleable dust produced during this stage, in order to estimate potential increases relative to the existing baseline concentration and to subsequently compare them with the maximum levels established by current legislation. Sampling locations will be located in areas determined at the sole and exclusive discretion of the Inspection.

Regarding suspended dust, at least one measurement must be taken every 15 days during the workshop's busiest period, in the same location as that indicated for settleable dust, and for 20-minute periods.

3.1.2.- Noise: Sound pressure levels produced during peak hours must be measured at least once every 15 days in the following areas: inside the workshop, in the machine operation area, and at two measurement points indicated below (the exact location will be determined by the Inspection):

- * One (1) on a street with very low traffic
- * One (1) in a high traffic area

Noise levels must comply with applicable legislation.

3.1.3.- Soils: The correct arrangement of temporary drains must be verified during the construction stage, through periodic inspections by Municipal personnel, especially during periods of expected greatest rainfall (months from October to March).



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

The Contractor must take the necessary measures to prevent all types of flooding, ensuring the proper functioning of the drains throughout the duration of the work.

Surplus excavation materials: The Contractor shall place at the side of the excavations made in roadways or sidewalks the material strictly necessary for backfilling, in a manner that does not interfere with stormwater drainage. Upon completion of backfilling, excavation work, and earthworks, the Contractor shall remove the surplus material on the same day and deposit it at the location indicated by the Inspection within the urban area.

The correct disposal and evacuation of solid waste generated must be periodically monitored, in accordance with the suggestions in point 2.2.3 "Disposal of solid waste generated during the construction stage".

3.1.4.- Water quality - Existing residential drains: The correct disposal and evacuation of the generated sewage waste must be controlled, according to what is suggested in point 2.2.4 "Disposal of sewage waste from the construction site". Likewise, all waste (and sewage) that the frontage owners currently evacuate to chambers in sidewalks and/or to open-air gutters. The Contractor will foresee and execute all necessary measures so that they are neutralized (in their polluting effects) until the regulatory connection to the absorption well is made. In the event that, due to the location of said wells, they are in the roadway area and the landslide must be the responsibility of the Contractor, said reconnection must be carried out by the same. The only residential drains that the Contractor is authorized to connect to the new curbs are those of storm origin, being the responsibility of the same to verify said verification at the time of connection.

3. 2.- Operation stage: The correct disposal and evacuation of the generated sewage waste must be controlled, in accordance with the provisions of point 2.2.4 "Disposal of sewage waste from the construction site".

3.2.1.- Air quality: Due to the low concentration of combustion gases, smoke and soot expected, a specific monitoring plan is not considered necessary in this sector.

The same general criteria adopted for the rest of the City (i.e., smoke and gas control at mobile sources) should be applied.

3.2.2.- Noise: Periodic measurements of sound levels must be carried out, in accordance with the provisions of the current Municipal Ordinance and compared with expected sound levels.

3.2.3.- Population: The Municipality, through the competent Directorates, must control the population's activities, so that no industrial, commercial or residential settlements incompatible with those permitted by the Urban Code occur.

**GENERAL TECHNICAL SPECIFICATIONS FOR
TEMPORARY VERTICAL SIGNALS FOR WORKS AND DETOURS**

Art. No. 1: DESCRIPTION

In order to guarantee the safety of road users, third parties and personnel involved in the work, the Contractor must provide, under its sole responsibility, adequate signage in areas where, due to the work carried out and/or in progress or due to causes attributable to the work, risk situations arise, such as:

- Narrowing of the road,
- Temporary diversions,
- Deep excavations or ditches,
- Unevenness in the pavement,
- Machines or workers working,
- Etc.

The devices and elements to be used and their location scheme in the site must respond to the specific characteristics and forms.

In all cases, the Contractor may incorporate devices or elements of superior technology or other signaling schemes to increase or provide the safety conditions required in each case.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

This includes the construction and installation of *temporary road signs*, in accordance with the attached technical specifications and plans, and with Annex L, Uniform Road Sign System, of the Regulatory Decree of Law No. 24,449 – art. 22. High-quality engineering-grade reflective sheeting will be used.

Signs must remain visible, clean, reflective, and located in the locations provided in the approved layout for as long as their message is necessary for the intended purpose.

For nighttime signaling, these signals must be equipped with permanent or flashing lighting elements.

The signs consist of:

- Galvanized iron sheet signage with symbols and/or messages mounted on wooden posts,

- Drums,
- Cones,
- In the village,
- Eyeliners,
- Etc.

According to the dimensions and other data detailed.

Art. No. 2: DEVICES AND ELEMENTS

2.1.- Posters:

Warning and regulatory signs will be of the dimensions standardized by the DNV, and special information signs will have the minimum dimensions indicated:

- REGULATORY SIGNS: 0.60 m wide by 0.80 m high.
- PREVENTION SIGNS: 0.90 m high by 0.90 m wide.

The font will be Helvetica Medium, with upper and lower case letters. The letter sizes **and** symbols will comply with the standards established by the National Highway Administration.

The signs will be provided with mobile or fixed supports depending on their intended use, and their lower edge must be at a height of 1.30 m from the level of the roadway centerline.

2.1.1.- Colors and symbols:

2.1.1.a.- Preventive and Special Information: They will have an orange background and black or white symbols

2.1.1.b.- Regulatory: They will have a white background, red and black letters and symbols.

In all cases, high-index engineering-grade reflective sheets and 2 mm thick galvanized iron sheets will be used.

2.3.- Lighting Devices:

2.3.1.- Reflectors:

When night work is required, the area where it is being performed must be adequately illuminated using reflectors. Lighting units must be positioned so as not to glare vehicle drivers and allow for proper illumination of the work area.

The devices must be mounted on easily transportable columns. The light level for work areas must be 20 to 30 lux.

2.3.2.- Continuously lit lamp:

They consist of a series of lamps protected by translucent red devices that are used to indicate:

- Obstructions,
- Danger,
- Delineation of a roadway in a construction zone.

2.3.3.- Flashing electric and/or photovoltaic lights:



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

These hazard identification lights are flashing, with a yellow light and a lens with a minimum diameter of 0.20 m. They can operate individually or in groups throughout the day.

2.3.4.- Food:

The Contractor must provide power for all lighting devices during the established operating periods, which may be supplied from the grid, generator sets, batteries, solar panels, etc.

The use of fuel-powered devices of any kind is prohibited.

Art. No. 3: TRAFFIC CONTROL IN WORK AREAS

3.1.- Description:

A traffic control scheme must be used in each work zone, which will consist of the areas detailed below.

At least 15 business days before the start of work, the Contractor is required to submit a "Construction Site Marking" scheme to the site inspector for approval.

3.1.1.- Advanced caution area:

It marks the beginning of the controlled traffic zone. The first sign will be a sign indicating the obstacle to be crossed and the distance to it (detour, reduced roadway, lane narrowing, etc.), marked at the top. Within this area, more signs will be posted with the same characteristics as the previous one, also indicating maximum speeds, which will be established based on the characteristics of the location.

3.1.2.- Transition area:

In this area, traffic traveling on the closed lane is channeled toward the temporary lane. The number of channeling elements depends on the length of the transition and the element used. The construction inspector may require the placement of beacons on the channeling elements.

3.1.3.- Prevention area:

It is an obstacle-free zone that must be left between the transition area and the work area. It will have the same length of the transition area and the same number of channeling devices.

3.1.4.- Work area:

This is the area where the planned work will be carried out. Work areas longer than 200 m will not be permitted unless authorized in writing by the Construction Inspectorate. The aforementioned channeling devices will continue to be installed throughout this area.

3.1.5.- Final area

Area where the controlled traffic zone ends, from which drivers resume normal driving. This area will be marked by at least one sign indicating END OF WORK ZONE. In addition, a transition will be marked to channel traffic into the corresponding lane, the length and number of devices of which will be indicated on the diagram.

3.2.- Signaling and channeling scheme:

The channeling elements and devices will be those determined by the work inspection.

When similar situations arise, as described above. Schemes for any other cases not covered above will be developed based on the guidelines stated.

3.3.- Traffic control in sectors with a single lane of use:

When two-way traffic must use a single lane for a limited distance, precautions shall be taken to alternate vehicle passage. Controls at each end of the section must be arranged to allow easy movement of opposite lines of vehicles. Alternating traffic shall be regulated by

through **traffic lights and flagmen.**

3.3.1.- Traffic lights:

They are preferably used to regulate the circulation of vehicles in single-lane sections that, due to their length, road conditions or other reasons, do not allow visual contact between the vehicles.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

ends of the sector to be controlled. Traffic lights must consist of three circular lenses with a diameter of no less than 20 cm, colored red, yellow, and green from top to bottom.

They must be located on a mobile base at a height of no less than 2.50 m and no more than 4.50 m from the roadway to its lower part.

3.3.2.- Banderilleros:

To control the single-lane zone, two flagmen may be placed at both ends. They will monitor the direction of traffic using indicators given to drivers or by communicating via radio receivers.

3.4.- Manual signaling devices:

To control traffic in work areas, a series of manual signaling devices will also be used, such as red flags or paddles with "STOP" and "SLOW" messages. These devices will be used during daylight hours. The flags will be a minimum of 0.60m x 0.60m red, secured to a 0.90m white pole; the paddles will be a minimum of 0.40m wide, with lettering at least 0.15m high. The background of the "STOP" paddle will be red with white lettering and borders, and the "SLOW" paddle will be orange with black lettering and borders. Figure 10. If necessary, their use at night will be made of reflective material.

Art. No. 4: GENERAL PROVISIONS

4.1 All personnel performing work on the roadway must wear a light-colored jumpsuit or shirt and pants with a logo, and reflective elements on the chest and back. Personnel serving as flaggers must wear a reflective vest or poncho.

4.2 All equipment used by the company in the execution of the work must be properly marked according to its characteristics. Vehicles must be equipped with flashing or rotating amber beacons.

4.3 Parking of items, equipment or materials is strictly prohibited 24 hours a day on roadways, shoulders or paths that could pose a danger or risk of accident to vehicular traffic.

4.4 When the horizontal marking of the roadway in the traffic control scheme causes confusion to drivers, it must be removed and reinstated immediately after the work is completed.

4.5 In all cases where temporary horizontal marking on the pavement is necessary, it must be removed immediately after its purpose has been completed.

4.6 In the event that trenches up to 1.20 m wide are built in the roadway and which, due to the type of work, remain open for a period of more than 8 hours, they must be covered with suitably shaped steel plates to allow safe circulation of vehicles.

4.7 If, when implementing the traffic control scheme approved by the Works Inspectorate, deficiencies are observed that imply any type of risk, the contractor will be obliged to correct and improve them, submitting a new scheme for consideration by the Works Inspectorate.

4.8 The contractor shall be required to maintain all signs, devices, and elements in their locations and in perfect working order. To this end, they must implement permanent 24-hour monitoring of the approved design. When the construction area is affected by fog, illuminated signage shall be reinforced by increasing the number of elements or equipping them with fog-breaking spotlights.

4.9 The expense required for the implementation of construction work signage, its maintenance and subsequent removal will not receive any direct payment, its price being included in the other items of the contract. In case of delays, deficiencies, lack of maintenance or failure to comply with orders from the Inspection regarding the signage of construction works, this, after prior notification by service order, may order the provision and installation of the signage.

signaling scheme charged to the contractor, plus 50% as a penalty, which will be deducted from the first certificate issued or from the credits the contractor has in its favor.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

4.10 SIGNALING OF WORKS AND/OR DETOURS: It is the Contractor's obligation to signal the entire route of the detours and auxiliary roads that are adopted, ensuring their effectiveness with signs that do not generate doubts, as well as the formulation of all necessary warnings, to orient and guide the user, both day and night, for which in the latter case, the use of signs and luminous beacons adapted to the specifications established in the contract will be mandatory. Section L-19 of the Technical Specifications of the NATIONAL DIRECTORATE OF ROADS – 1998 Edition.

4.11 PRECAUTIONS IN CONSTRUCTION WORKS AREAS: The Contractor shall prevent the user from traveling on sections of road that are not authorized or that have cuts, dangerous obstacles or unfinished construction stages of works in progress, which could cause accidents, for which purpose it shall place warning signs and barriers or other effective means. It shall be responsible for the placement of signs, signals and beacons indicating the dangerous places that exist as a result of the execution of works or tasks of any kind in the sections under construction and must adopt the measures conducive to avoiding accidents in said places.

4.12 RESPONSIBILITY FOR DEFICIENT SIGNALS ON THE WORKS OR DEVIATIONS EXECUTED BY THE CONTRACTOR: It is established that the Contractor shall not have the right to any claims for compensation or reimbursement from the Client and/or Bidder, for damages caused by public traffic on the works, with the Client and/or Bidder being exempt from all liability for accidents that may occur.

4.13 PENALTIES FOR DEFICIENT SIGNALIZATION OF WORKS OR DEVIATIONS: If the Contractor does not comply with its obligations regarding the enabling of deviations and their signaling, the Inspection will not allow the continuation of the works to be executed or in execution, without prejudice to the penalties that may be applied for non-compliance with the works schedule, tasks to be performed or deficiencies that prevent their enabling.

4.14 USER INFORMATION SYSTEM: The Contractor will design a user information system, which must be approved by the Inspection, that will allow them to be informed of the condition of the roads and the sectors that may present problems due to scheduled works.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

PAYROLL OF BLOCKS

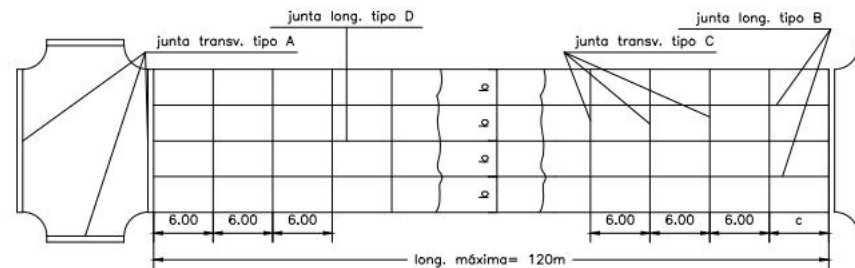
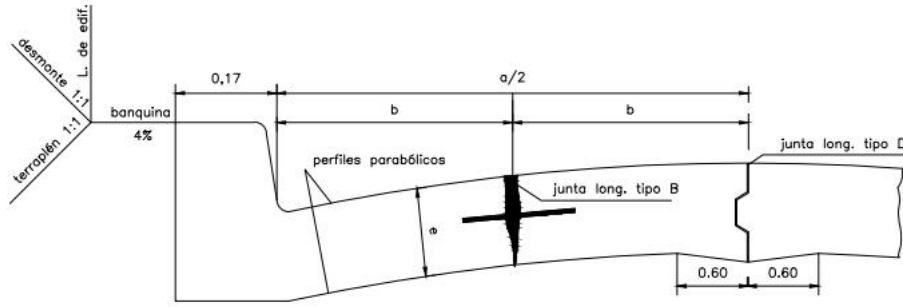
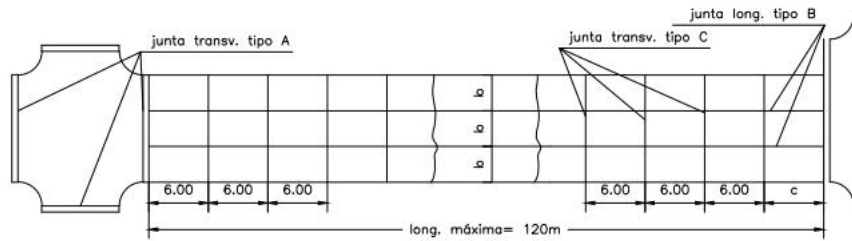
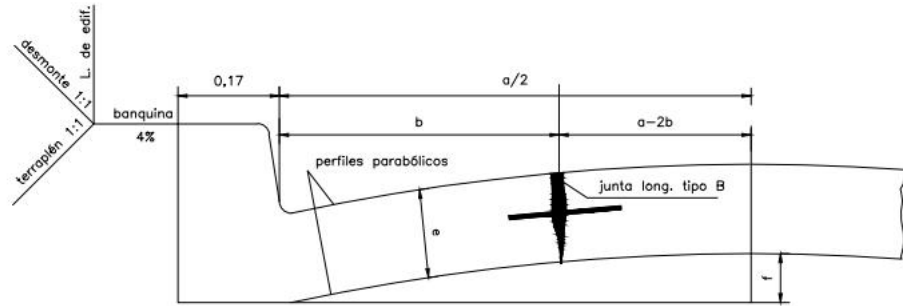
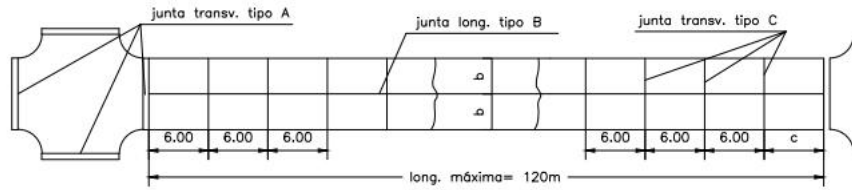
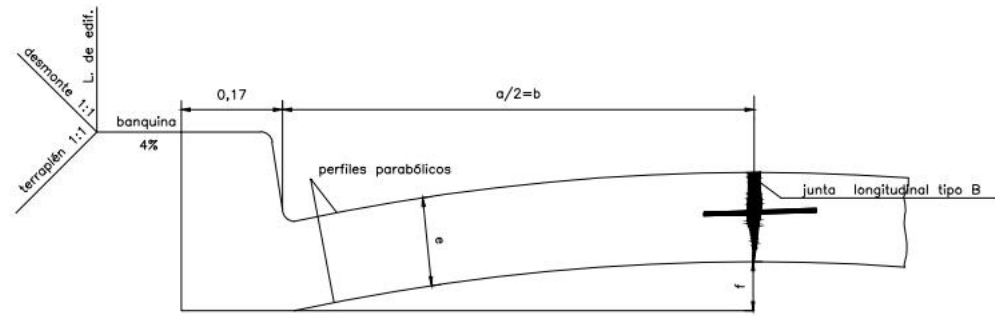
Tierra del Fuego and L. Torres and Rocha Enecait	1 block
Falkland Islands E/L. Torres and Rocha Enecait	1 block
TOTAL.....	2 blocks

WORK: "PAVING WITH H°S° IN B° CARLOS PELLEGRINI – 1ST STAGE"



 STREETS TO BE PAVED

 THROUGH DITCHES



espesor de calzada a	b	AREA TRANSVERSAL DE LA CALZADA Y CUANTIA DE HORMIGON POR M3												Fecha (F) para pendientes			NOMENCLATURA
		e=14cm		e=15cm		e=16cm		e=18cm		e=20cm		e=22cm		hasta 3%	3% a 8%	más de 8%	
		Area	Cuantía	Area	Cuantía	Area	Cuantía	Area	Cuantía	Area	Cuantía	Area	Cuantía				
m	m	m2	m3/m2	m2	m3/m2	m2	m3/m2	m2	m3/m2	m2	m3/m2	m2	m3/m2	cm			
6	3.00	0.936	0.156	0.999	0.166	1.062	0.177	1.189	0.198	1.316	0.219	1.443	0.240	9	6	3	P.T. (hs) 60e 4-57
7	3.50	1.076	0.154	1.149	0.164	1.222	0.174	1.369	0.195	1.516	0.216	1.663	0.237	10	7	3	P.T. (hs) 70e 4-57
8	4.00	1.216	0.152	1.299	0.162	1.382	0.172	1.549	0.193	1.716	0.214	1.883	0.235	12	8	4	P.T. (hs) 80e 4-57
9	3.00	1.356	0.150	1.449	0.161	1.542	0.171	1.729	0.192	1.918	0.213	2.103	0.234	14	9	4	P.T. (hs) 90e 4-57
10	2.50	1.544	0.154	1.647	0.164	1.750	0.175	1.957	0.195	2.164	0.216	2.371	0.237	15	10	5	P.T. (hs) 100e 4-57
11	2.75	1.684	0.153	1.797	0.163	1.910	0.174	2.137	0.194	2.364	0.215	2.591	0.236	16	11	5	P.T. (hs) 110e 4-57
12	3.00	1.824	0.152	1.947	0.162	2.070	0.173	2.317	0.193	2.564	0.213	2.811	0.234	18	12	6	P.T. (hs) 120e 4-57
13	3.25	1.964	0.151	2.097	0.161	2.230	0.172	2.497	0.192	2.764	0.212	3.031	0.233	19	13	6	P.T. (hs) 130e 4-57
14	3.50	2.104	0.150	2.247	0.160	2.390	0.170	2.677	0.190	2.964	0.211	3.251	0.232	21	14	7	P.T. (hs) 140e 4-57

TABLA I

BARRAS PASADORES DE HIERRO PARA JUNTAS TRANSVERSALES DE EXPANSIÓN TIPO A

espesor de la calzada (cm)	f 19mm y 40cm de longitud					
	Separación en cm para los siguientes valores de K (módulo de reacción de la subrasante kg/cm2)					
	0.83	1.65	3.31	4.97	6.62	8.27
14	45	45	45	41	36	32
15	45	45	45	37	32	29
16	45	45	43	35	30	28
18	45	45	36	30	26	26
20	45	36	30	26	22	21
22	36	34	27	23	20	20

TABLA II

BARRAS DE ANCLAJE PARA JUNTAS LONGITUDINALES TIPO B

ancho de calzada (m)	f 12mm y 76cm de longitud					
	Espesor de calzada (cm)					
	14	15	16	18	20	22
	separación (cm)					
6,9,12	75	75	75	65.5	60	60
7,14	75	75	66.5	60	54.5	50
8	66.5	66.5	60	54.5	50	46
10	75	75	75	75	75	66.3
11	75	75	75	75	66.5	66.5
13	75	75	75	66.5	60	54.5

TABLA III

BARRAS PASADORES PARA JUNTAS TRANSVERSALES DE CONTRACCIÓN TIPO C

espesor de la calzada (cm)	f 19mm y 40cm de longitud					
	Separación en cm para los siguientes valores de K (módulo de reacción de la subrasante kg/cm2)					
	0.83	1.65	3.31	4.97	6.62	8.27
14	45	45	45	45	44	39
15	45	45	45	45	39	36
16	45	45	45	42	37	33
18	45	45	45	37	32	29
20	45	45	38	32	28	26
22	45	43	34	29	26	23

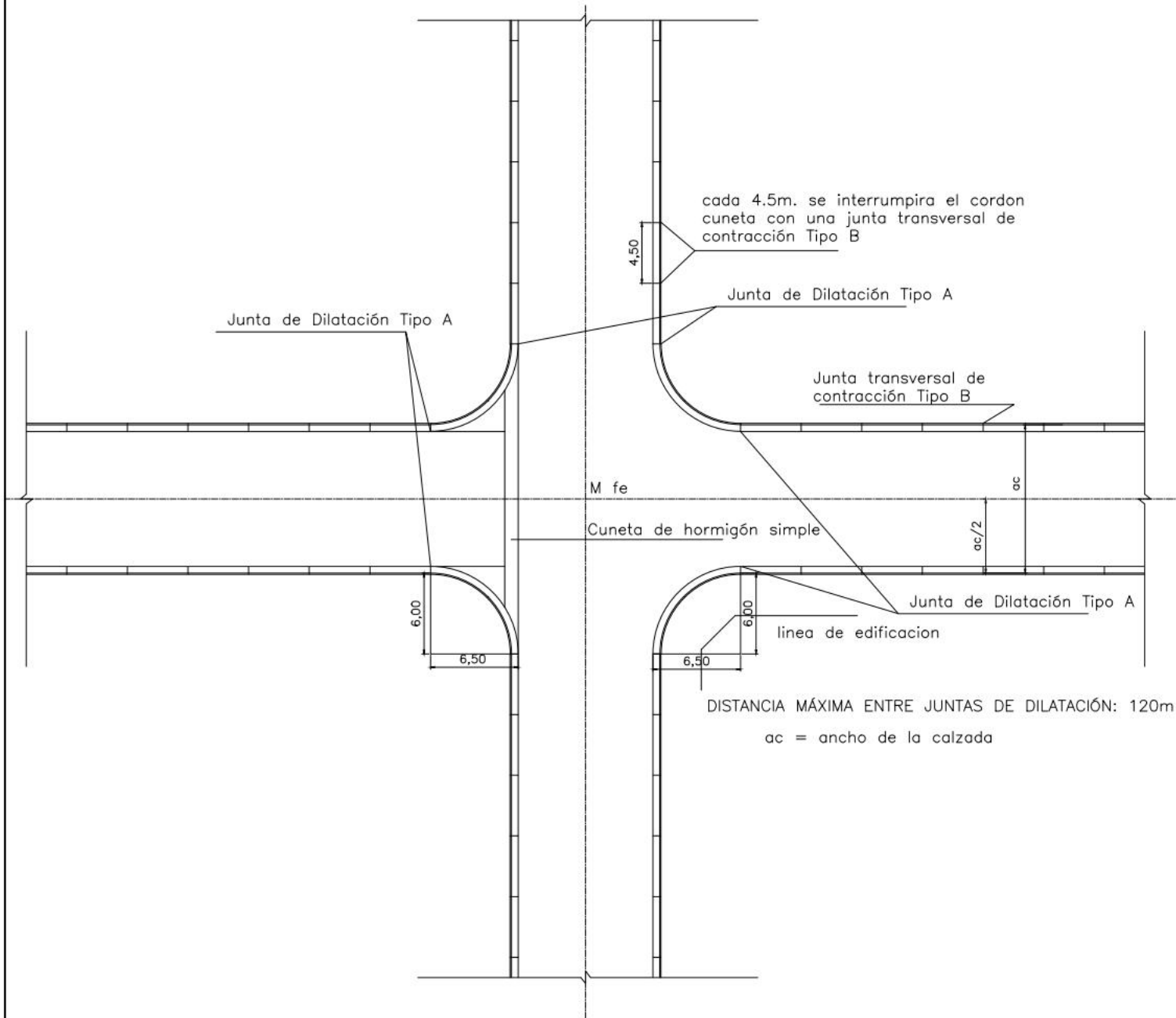
NOTAS

- 1) En el caso de construir las calzadas en dos fajas longitudinales se colocará en todos los casos una junta ensamblada tipo D en el eje.
- 2) La disposición de las juntas en las bocacalles se dará en obra.
- 3) Todas las medidas indicadas en las secciones transversales, plantas, juntas y detalles están en cm.
- 4) La dimensión C estará comprendida entre 300 y 600 cm.
- 5) La banquina se desmontará hasta la línea de edificación o hasta la vereda existente.
- 6) El valor del módulo de reacción de la subrasante (K) se establecerá en cada caso, en el plano de replanteo y/o especificaciones especiales.

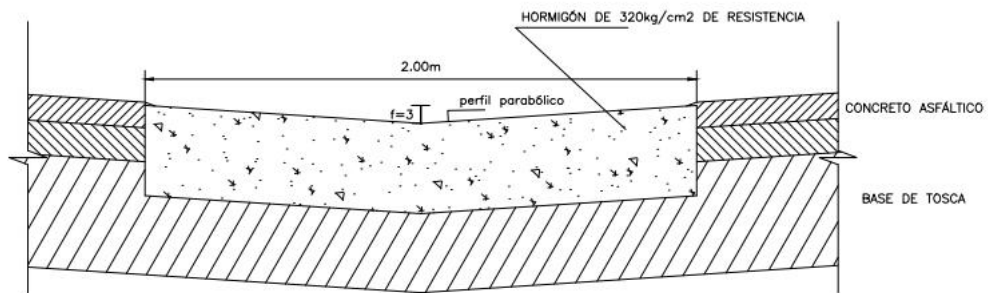
MUNICIPALITY OF OLAVARRIA

PAVEMENT WITH HoSo

DISTRIBUCION DE JUNTAS

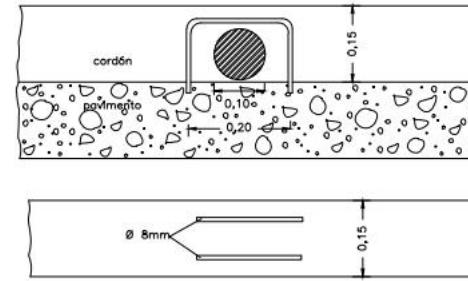


CUNETA DE HORMIGÓN SIMPLE

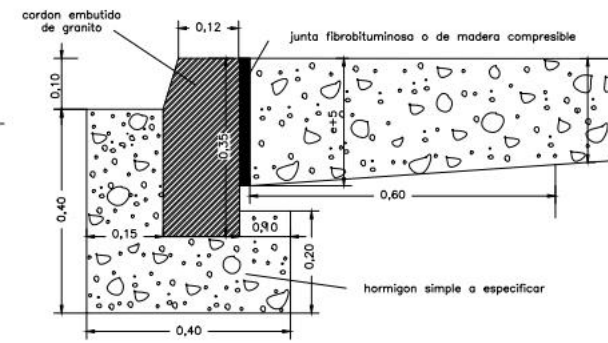


DETALLES

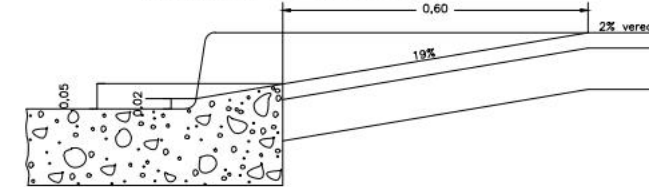
REFUERZO DE CORDONES EN CORRESPONDENCIA CON LOS ALBAÑALES



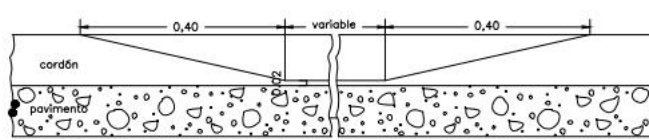
TERMINACION DE CALZADA



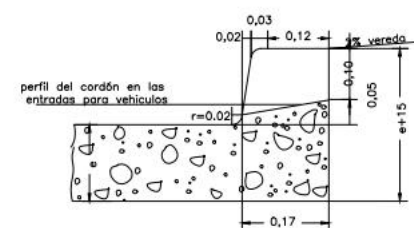
CORDON CARA VISTA Y PERFIL EN LAS ENTRADAS DE VEHICULOS



ENTRADA PARA VEHICULOS

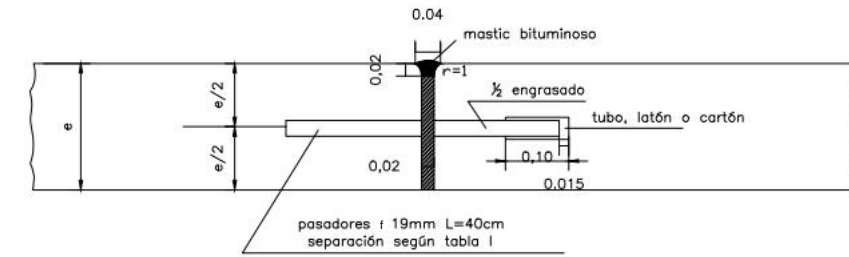


ENTRADA PARA VEHICULOS

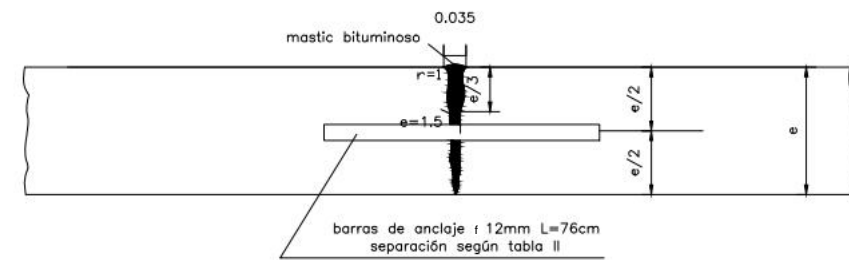


JUNTAS

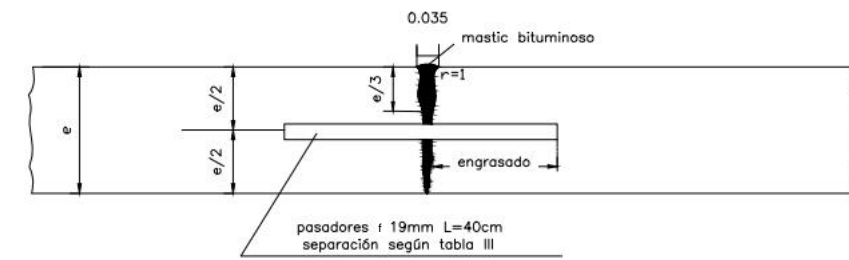
TRANSVERSAL DE EXPANSION TIPO A



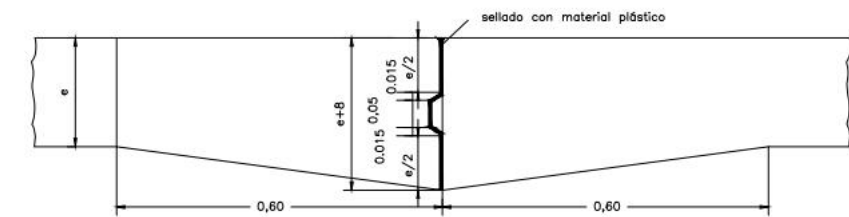
LONGITUDINAL DE ARTICULACION TIPO B



TRANSVERSAL DE CONSTRUCCION TIPO C



LONGITUDINAL DE CONSTRUCCION TIPO D



MUNICIPALITY OF OLAVARRIA

PAVEMENT WITH HoSo



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD
– 1st STAGE".**

PARTICULAR LEGAL SPECIFICATIONS

ARTICLE 1° - PURPOSE: The purpose of this Public Tender is to carry out the Paving with H^oS^o in the Pellegrini neighborhood, the streets Tierra del Fuego and Islas Malvinas between Lisandro de la Torre and Rocha Enecait streets in the city of Olavarría.

ARTICLE 2 - REGULATIONS: The following regulations are included in this Tender:

- a) Organic Law of Municipalities (Decree Law 6769/58 and its amendments).
- b) Accounting Regulations and provisions of the Honorable Court of Auditors of the Province of Buenos Aires that are applicable.
- c) General Legal Terms and Conditions 2003
- d) Supplementarily, Provincial Decree No. 290/21 and Resolution No. 943/21.
- e) Decree No. 1054/2020 on electronic notifications.
- f) Safety and Hygiene Regulations Manual.

The regulatory provisions that have not been expressly modified by the Specific Legal Conditions will apply to all contractual purposes.

ARTICLE 3 - OFFICIAL BUDGET AND CONTRACTING SYSTEM: The

The estimated total official budget is ONE HUNDRED FIFTEEN MILLION PESOS (\$ 115.000.000,00.-).

The works subject to this tender will be contracted by the PRICE system UNITARY AND UNIT OF MEASUREMENT.

ARTICLE 4 - FINANCIAL ADVANCE: At the request of the Contractor, once signed the corresponding Contract and prior to the start of the Work, a financial advance may be granted for one time only up to 20% (twenty percent) of the total contracted amount, which will be discounted from the corresponding Payment Certificates in the same proportion, and according to the certification of progress of work until the completion of the work subject to tender.

The Contractor must guarantee said advance payment by integrating a guarantee on the advance payment effectively received through a surety insurance policy.

ARTICLE 5° – PERIOD OF EXECUTION: The period for providing the service is SIXTY (60) calendar days, counting from the date of the work start certificate.

ARTICLE 6° - CONSULTATION AND ACQUISITION OF THE FILE: The document and others Tender documents may be collected until 1:00 p.m. on April 30, 2025, at the San Martín Municipal Palace, Tender Office. The value of the document is



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

THREE HUNDRED FORTY THOUSAND SEVEN HUNDRED FIFTY-EIGHT PESOS (\$ 340.758,00).-

ARTICLE 7 - EVACUATION OF CONSULTATIONS: While the call to

Tender, and up to TWO (2) business days before its end, queries will be answered that the interested parties formulate, which must be made in writing. The resolutions that in this regard the Municipality adopts will be brought to the attention of those who have acquired the Tender documents.

ARTICLE 8 - CONSULTATIONS AND CLARIFICATIONS. CIRCULARS: The Directorate of

Tenders and/or the Directorate of Hydraulic Works and Pavement dependent on the Secretariat of Public Works, Infrastructure and Public Services may be carried out ex officio, or upon request on the part of the clarifications or corrections to the Documents by issuing Circulars, the which will make up the clauses governing this tender. If the interested party has any doubt or difficulty in the interpretation of the specifications or notice any error or omission in the technical documentation during the preparation of your proposal, you may request in writing its clarification to the Tender Directorate up to TWO (2) business days prior to the act of opening of envelopes. Circulars and clarifications will be communicated to all purchasers of the document to the physical or electronic address provided at the time of purchase.

Questions submitted after the deadline will not be answered. However, if the Directorate of Hydraulic Works and Pavement dependent on the Secretariat of Public Works, Infrastructure and Public Services considers that the consultation is relevant and contributes to a better understanding and interpretation of the document in question, a circular will be produced clarification, which will be communicated to potential bidders, becoming part of the Folder.

The communications that are made between the Municipality and the interested parties, bidders and awardees, will be carried out through the addresses registered for this purpose.

ARTICLE 9 - CONDITIONS THAT THE PROPONENTS MUST MEET: The

Proposers must comply with the following requirements:

1. Be registered in the Municipal Registry of Suppliers.
2. Maintain your Proposals for a period of thirty (30) days from the date of opening of envelopes of this Tender. After this period, it will be considered that They maintain their Offers until they express in a reliable manner their willingness to retract. In case of withdrawing the Offer in violation of the foregoing, the Proponent will lose the security deposit that he/she has made, without the right to



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

claim, while preserving the right of the Municipality to demand compensation for damages.

3. Have a current registration in the Registry of Bidders of the Province of Buenos Aires or its equivalent in the Nation, or in the Municipal Registry of Bidders, specialty "PAVING WORKS",
4. Integrate the **Offer Guarantee**, which will be ONE PERCENT (1%) of the amount of the Official Budget, that is, ONE MILLION ONE HUNDRED FIFTY THOUSAND PESOS (\$ 1,150,000.00), which may be formed by any of the forms indicated below continuation:
 - a) Through the Municipal Tax Collection Office, using the authorized payment methods; or
 - b) Surety insurance policy issued by an insurer authorized by the National Insurance Superintendency.

ARTICLE 10 - KNOWLEDGE OF THE WORK SITE: The bidder

must recognize the work sector and collect all the necessary information, so that the proposal is made on the basis of its own means of information. Therefore, if the work is awarded to you, no difference will be recognized. some due to alleged discrepancies in the conditions of implementation.

ARTICLE 11 - FORM OF PRESENTATION OF PROPOSALS: The

Proposals will be contained in two (2) sealed envelopes. *On the cover of both envelopes The Public Tender to which it refers must be indicated, as well as the day and time of opening of the tenders.*
Proposals:

MUNICIPALITY OF OLAVARRIA

PUBLIC TENDER NO.: 8/2025

PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE

FILE NO.: 1025/25

DATE: 05/05/2025

TIME: 10 a.m.

The first envelope, identified as "**ENVELOPE NO. 1: DOCUMENTATION**", will contain in its interior the following documentation:

- 1) Tender File duly signed by the proponent in each of its folios, as proof of compliance, with the descriptive report and technical specifications corresponding;
- 2) Proof of acquisition of the file;



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD
– 1st STAGE".**

- 3) Guarantee of maintenance of the proposal, as provided for in Art. 9;
 - 4) Proof of registration as a Supplier of the Municipality of Olavarría;
 - 5) Proof of current registration in the Registry of Bidders of the Province of Buenos Aires or its equivalent in the Nation, or in the Municipal Registry of Bidders, specialty "PAVING WORKS".
 - 6) Affidavit expressly accepting the jurisdiction of the Contentious Court Administrative Court of the Azul Judicial Department, excluding any other jurisdiction or jurisdiction that may correspond;
 - 7) Certificate of work history of the type of the tendered work, if any;
 - 8) Debt-Free Certificate issued by the Municipal Public Revenue Directorate or sworn statement indicating that you are not a taxpayer of this Municipality;
 - 9) If the proponent is a commercial company, it must present proof of its constitution and scope of its corporate purpose, and instrument that accredits the legal status of the presenter.
- UTE: The Proponents may submit their bids together through a Contract of Temporary Union or the commitment to form one if they are awarded the contract, always who individually satisfy the requirements established in the Civil Code and Commercial of the Nation, Law 19,550 and its amendments in force to date.
- 10) Certificate issued by the Ministry of Justice of the Province of Buenos Aires, or competent body, from which it emerges that the presenter, or the members of the body administration in the case of a legal entity, are not registered in the Registry of Debtors of Alimony (Law 13.074 and its regulations);
 - 11) List of equipment (brand, model, etc.) to be provided in the execution of the work, which must be certified by the requesting authority at the time of preparing the admissibility report technique;
 - 12) Affidavit stating domicile in the city of Olavarría, and address electronic in accordance with Decree No. 1054/2020.

Failure to comply with the requirements set out in points 1) to 3) will be grounds for rejection of the Proposal, returning the second envelope unopened at the opening ceremony. _____

Failure to present ENVELOPE No. 2 simultaneously with ENVELOPE No. 1 will result in rejection in limine.-

Failure to comply with the requirements in the remaining points may be resolved within the deadline of TWO (2) business days immediately following the opening day. Failure to comply will result in lead to the rejection of the offer, with the loss of the guarantee provided.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 “PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE”.

The second envelope, identified as “**ENVELOPE NO. 2: PROPOSAL**”, will contain by triplicate:

- 1) the request for quotation in accordance with RAFAM.
- 2) Unit price sheet, *prepared on the form that accompanies this documentation, WITHOUT EXCEPTION, duly signed by the Proponent.*

The unit price will be assumed to include, in addition to costs, benefits, expenses financial and tax (including Gross Income and VAT).

The presentation of the documentation of ENVELOPE NO. 2 is mandatory and cannot be corrected, its omission being a cause for dismissal in the opening act.

The presentation of the proposal will not give any right to the offeror for its acceptance. by the Municipality, which also reserves the right to require the bidders to price analysis or clarifications on those items that you consider appropriate, and have the books, accounting verifications etc., these should facilitate tasks, putting them to use at the disposal of the Municipality at any time, the elements that it deems necessary.

The offer will be made in Spanish, in printed form, saving any erasures, amendments or line spacing. All documentation submitted with the offer (including Bid Documents) Bases and Conditions, descriptive report and plans) must be signed on all pages by the bidder.-

ARTICLE 12 - OMISSION OF SIGNATURES: The omission of signatures in the documentation may be replaced or corrected if the authority that directs the act of opening the Tender so decides. considered feasible.

ARTICLE 13 - ERRORS IN THE PROPOSALS: In case the proposals presented suffer from contradictions between the amounts stated in numbers and letters, whether corresponding to unit, partial and/or total prices, will be taken as valid for the quotation are those expressed in letters.

ARTICLE 14°- OPENING OF PROPOSALS: The Proposals will be opened and read in a public act at the place, day and time set in the call for tender, at the Directorate of Tenders of the Municipality of Olavarría, in the presence of the Municipal Mayor and/or the officials designated for this purpose and the interested parties who wish to do so. According to The actions taken will be recorded in which the proposals presented and listed will be detailed. in order of opening, the amount of each of them and other documentation presented.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

The minutes will be read and signed by the aforementioned officials of the proponents attendees and those present who wish to do so.

ARTICLE 15 - VIEW OF PROPOSALS: During two business days after the opening, the proposals will be made available to the various bidders for the purposes of the formulation of the challenges they deem appropriate, which must be made in writing and submitted to the Municipal Reception Desk office, within the deadline established above. Each challenge must be supported by a deposit of TWENTY ONE THOUSAND PESOS (\$20,000.-) for each contested fact. Said value, in the event that the challenge is admissible, and regardless of the outcome, it will be reinstated simultaneously with the communication of the decision made. If they were If the deposit is deemed inadmissible, it will be definitively transferred to the municipal patrimony. The decision on whether or not the challenges are admissible shall be final. In no case may the bidders make additions and/or extensions of any kind referred to to the offer itself, which imply modification of the same.

ARTICLE 16 - ALTERNATIVE OFFERS: Alternative proposals will not be accepted.

ARTICLE 17 - BACKGROUND INVESTIGATION / CLARIFICATIONS: The

The Municipality reserves the right to carry out, prior to the award, the inquiries and checks that it deems necessary with respect to professional, technical, and financial, etc. of the proponent, the latter being obliged to provide everything that was requested, including proof of payment of their corporate, labor, social security, tax, etc. of the last six (6) months. Failure to submit the supporting documents required from the proponent may determine the automatic rejection of the offer.

ARTICLE 18 - MAINTENANCE OF PROPOSALS: The offeror must maintain your proposals up to a maximum of thirty (30) days from the date of opening of envelopes of this Tender. After this period, it will be considered that they maintain their offers until they express their intention to withdraw in a reliable manner. In the event of withdrawing the If an offer is made in violation of the above, the proponent will lose the deposit. guarantee that has been made, without the right to claim, safeguarding the right of the Municipality to demand compensation for damages that may have been caused.

ARTICLE 19 - EVALUATION OF OFFERS: For the purposes of determining the most convenient offer to the interests of the Municipality, the Tender was made, the Department



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

Executive through the corresponding technical areas, will proceed to study the proposals and approval of the bidding process for the purposes of awarding the works, being able to also reject all the proposals if it does not consider them convenient, without This gives the proponents the right to make any claim.

ARTICLE 20 - AWARD - NOTIFICATION: The Executive Department

will award by Decree the tendered items to the most convenient offer, according to the criteria stated technicians, notifying the result to all the proponents through analog or digital media at the addresses duly established.

ARTICLE 21° - RETURN OF THE SECURITY DEPOSIT OF THE

PROPOSALS: The Bid Guarantee will be returned:

- 1) Once the maintenance period for the proposal has expired without the proposal having been submitted award, to the Proponents who so request;
- 2) After the award, and once it has become final, the bidders who do not benefit from it.

ARTICLE 22 - CONTRACT GUARANTEE: The successful bidder must guarantee the

fulfillment of the Contract within five days of notification of the award by the equivalent to FIVE PERCENT (5%) of the amount of the Contract, through money in cash or surety bond. The Contract Guarantee will be returned at the time of the final acceptance of the works.

ARTICLE 23 - SIGNING OF THE CONTRACT / EXPENSES AND SEALING: Within the

TEN (10) calendar days from the date of notification of the award, the signature will proceed. of the contract. The costs incurred in formalizing the contract will be borne by the successful bidder. It will be exempt from the Stamp Tax, in accordance with Article 123 of the Law 14.200.

ARTICLE 24 - START OF WORKS: The maximum period for the start of the

works is ten (10) calendar days from the signing of the contract, drawing up the relevant Act Start. In case of delay, the contractor will be required to start the work under warning of a fine and/or termination; the term of the work begins to apply from the date on which that should have started it.

ARTICLE 25 - WORK PLAN AND INVESTMENT CURVE: Together with the

Start-up Act, the successful bidder must submit the Work Plan for approval



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

final and the corresponding Investment curve, in paper format and digital file, The Municipality may make any observations it deems pertinent within the FIVE (5) days after submitting the documentation, otherwise it will be considered approved. Likewise, you must present the certificates that prove the coverage of the insurance established by current laws, in compliance with Art. 33 of these specs.

ARTICLE 26 - MEASUREMENT - PRESENTATION AND PAYMENT OF CERTIFICATES: The

Collection certificates will be prepared by the Contractor and submitted monthly by Reception Desk, within the first FIVE (5) business days of each month, based on the joint measurement of the Inspection and the Company. The certificate will include the tasks executed until the last day of the month prior to their presentation. Being the Municipality "Exempt", VAT will not be discriminated against. Payment for Certificates will be made within the thirty (30) days, counted from the date of approval. If there are observations that will force formal modifications, or missing documentation to be attached, the collection period will begin to run when the certificate is complete and approved. With each certificate the contractor must present:

- 1) Compliance with AFIP regulations, presenting F931 of the execution period of the tasks or the immediately preceding period (depending on the due date you (as applicable) with the corresponding proof of payment. The corresponding proof of payment must also be attached. payroll of employees declared in said organization, record of additions and deletions. In case If you are in a moratorium, present supporting documentation along with proof of compliance;
- 2) Copy of the receipts for staff remuneration, duly signed or copy of the corresponding pages of the book of remunerations duly audited by the Olavarría Delegation of the Ministry of Labor;
- 3) Proof of payment of the insurance detailed in Art. 33 of these conditions;
- 4) Affidavits and proof of payment of union dues.

It is also indicated that certificates submitted after the established deadline will be retained in the Tender Directorate until the following month, in respect of which the will proceed to carry out the review and processing during the first five business days.

ARTICLE 27° - REPAIR FUND: The following will be withheld from the value of each Certificate:

FIVE PERCENT (5%) as a Repair Fund. The amount thus formed will be will be returned to the contractor upon final acceptance of the work.



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD
– 1st STAGE".**

ARTICLE 28 - PROVISIONAL RECEPTION: For the Provisional Reception of the works, the results of the tests and verifications established by the General Technical Specifications, regarding the quality of the work executed.

ARTICLE 29 - FINAL RECEPTION: It will operate under equal conditions as for Provisional Reception and SIX (6) months after it has been carried out.

ARTICLE 30 - LEGAL RESPONSIBILITY OF THE CONTRACTOR: Reception Final and corresponding return of the Repair Fund will not exempt the Contractor and/or your Technical Representative from liability for his work in accordance with the laws generals.

ARTICLE 31° - TECHNICAL REPRESENTATION: The contractor must have a Technical Representative with a degree in Civil Engineering or Construction, with mobility. Likewise, there must be a suitable person on site to control and execute the tasks contracted. When submitting the work certificates, the contractor must accompany the receipts issued by the respective Professional Association that prove the compliance with Laws No. 5140 and 5920.

ARTICLE 32° - FINES: For violations committed by the contractor in relation to non-compliance with the provisions of this document and/or non-compliance with any other obligation inherent to the contract, the Municipality will determine the application of fines which will be graduated in percentage relation to the monthly remuneration paid by the Municipality to a Hierarchical staff category 34 (Secretary) of the Executive Department. The graduation of the same will be:

- 1) Due to delays in the initiation, suspension or unjustified stoppage of the works, due to delays in delivering the work within the established deadline and/or partial delays Regarding the Work and Investment Plan approved by the Municipality: Fine of up to Five percent (5%) of the aforementioned remuneration per day and for each case of breach.
- 2) For non-compliance with Service Orders: Fine of up to five percent (5%) of the aforementioned remuneration per day and for each case of non-compliance.
- 3) Due to the non-appearance of the Technical Representative in all those activities that give rise to technical procedures: Fine of up to five percent (5%) of the aforementioned remuneration per day and for each case of non-compliance.



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD
– 1st STAGE".**

- 4) Due to deficiencies or verifiable project errors, that is, when during the course of the execution of the works, deficiencies and/or errors in the project will be verified and the contractor does not communicate them to the Inspection, he will be liable to a fine of up to One percent (1%) of the contract amount, plus agreed additional amounts, at the price of bidding.

In case of repeated non-compliance, the amount of fines may be increased up to Two hundred percent (200%) of the basic salary previously determined by item and month. Fines They may be applied simultaneously when they correspond to different concepts and character daily in case of non-compliance that is verified in that way.

Fines will not be applicable when the failure to comply with the obligations is due to causes of force majeure or duly accredited fortuitous event, which must be reported and supporting documentation must be submitted within forty-eight (48) hours of the event has occurred. The acceptance of the causes invoked will be at the sole discretion of the Executive Department. Once the fine has been applied, its amount will be deducted from the percentage of the invoices that the service provider presents for collection and/or on the guarantee of contract fulfillment, as the case may be.-

When the accumulated amount of fines applied to the contractor is equal to or greater than fifteen percent (15%) of the contract amount, the contractor may be liable to the penalty provided for in Article 37 of the Public Works Law No. 6021.

This clause modifies the infractions and fines mentioned in the points I, II and III of art. 37 of the General Legal Terms and Conditions (Edition 2003).

ARTICLE 33 - INSPECTION: It will be carried out by personnel from the Works Department. Hydraulics and Pavement dependent on the Secretariat of Public Works, Infrastructure and Public Services, and/or any other technical personnel in the matter, designated by the Municipality.

ARTICLE 33 - PROVISION OF MATERIALS: The materials that result necessary for the correct execution of the tasks must be provided in full by the Contractor.

ARTICLE 34 - SERVICE ORDER BOOK AND ORDER NOTE: The

The contractor must submit to the Works Inspection TWO (2) books in triplicate that They will be used for communication between the Construction Inspection and the Company, together with a seal with the measurements and inscription ordered by the Inspection.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

ARTICLE 35 - INSURANCE: The Contractor must have all of its personnel

insured against occupational risks as required by current provisions.

Likewise, you must take out at your own expense the insurance established by current laws and

will maintain them for the entire duration of the work. The amounts established for

The coverage of the different risks will never be less than those required by law and

other current regulations. These include:

a) *Workers' Risk Insurance (Law 24,557)*. The Contractor, before starting the works and

For insurance verification, you must present the coverage certificate issued by the

ART, and Form SRT 51/97 or F931, as appropriate, showing the payroll of the

personnel involved in the work. **The policy must include a non-repetition clause.**

in favor of the Municipality of Olavarría. You must submit a monthly update of

said certificate (with the registrations and deregistrations verified)

b) *Compulsory life insurance (Decree 1567/74)*.

c) *Civil liability insurance for motor and/or towed vehicles*.

d) *Civil Liability Insurance*. It will cover injuries and/or damages to third parties caused by the

Contractor in the exercise of his activity.

e) *Personal accident insurance of the company owner(s) and their staff*

contracted, with the Municipality being the beneficiary. **The policy must include a clause**

of non-repetition in favor of the Municipality of Olavarría.

ARTICLE 36 - EXISTING INSTALLATIONS: The contractor will be the only one

responsible for any damage that may occur for any reason, and due to the work under his/her charge,

were produced in works of art, telegraph and telephone lines, fences, pavements and

existing roads, etc. It will be your sole responsibility to pay for any repairs that may be caused by such

reason should be carried out.

ARTICLE 37° - SAFETY, HYGIENE AND ENVIRONMENTAL CONSERVATION: The

The contractor must provide its employees with personal protective equipment and supplies.

general use and those specific to each task, providing the necessary instructions on

the correct use of the same, having to comply with the Safety Standards for

Contractors who are attached to this document, forming an integral part of this document.

The Contractor shall take all necessary measures to protect the environment and ensure the

safety of people; and eliminate or reduce negative environmental impacts during the

execution of tasks.

ARTICLE 38 - COMPLIANCE WITH SOCIAL SECURITY LAWS AND CHARGES

TAX: The Contractor must proceed to pay the remuneration of the employees on time.



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

its agents and operators also making deposits that comply with the laws current social security, social and union contracts. The Municipality may request at any time the supporting documents that prove the above. Once the contract has been concluded, the contractor must provide proof that all obligations have been paid social security, social and trade union issues arising from it. It is also expressly established that all taxes, duties, rights, will be the exclusive responsibility of the contractor national, provincial or municipal rates, taxes and/or contributions that must be paid as a result of the contract. Likewise, all personnel who occupy the In order to carry out the work, the contractor must receive remuneration not less than that set by current labor laws and in direct application of the Collective Agreement specific to the sector or activity that he/she carries out; he/she will enjoy the corresponding social benefits and must make the pension contributions established by law, and the Municipality may request periodically submit the respective certificates.

ARTICLE 39 - ASSIGNMENT OF THE CONTRACT-SUBCONTRACT: The Municipality does not will admit the partial or total transfer of the Contract, the partial or total subcontracting of the contracted services and/or partial work related to them, nor of the association of the contractor with third parties without prior written authorization from the Municipality, under penalty of terminating the contract with loss of the guarantee provided. Responsibility for compliance with what was agreed for them will continue to be theirs. exclusivity of the main contractor; likewise, claims between the latter and its subcontractor will be unrelated to the Municipality.

ARTICLE 40 - CONTRACTOR'S RESPONSIBILITY: Reception

Final completion of the works and corresponding return of the Contract Guarantee They will exempt the contractor from any liability that may apply to him, in accordance with the laws current. The contractor shall be liable to the Municipality and/or third parties for damages produced to people and/or things that, due to the fulfillment of the bidding object will occur, whatever the cause or nature, it being understood that there will be no right to request any compensation for this. The contractor must reimburse the amount of the possible convictions against the Municipality of Olavarría determined in proceedings administrative or judicial, including total costs and expenses, and may be made effective recovery of their assets, credits and/or security deposits within ten (10) days business days of notification, under penalty of termination of the Contract.

ARTICLE 41° - TERMINATION OF THE CONTRACT: The contract may be terminated, Without prejudice to the causes stated in the previous articles, in the following cases: 1)



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE".

By mutual agreement of the parties, and/or when due to unforeseen circumstances or force majeure it could not be the purpose of the contract is fulfilled. In this case, the Municipality will pay exclusively the work actually completed, without any of the parties being able to claim anything else compensation or indemnity in this regard; 2) By decision of the Municipality in the following cases: (a) Fraud or negligence to the detriment of the Municipality; (b) When there is no compliance with services for THREE (3) consecutive days in a calendar month, or for TEN (10) days alternating within a period of TWO (2) months, starting from the first breach; (c) Repeated serious reluctance or failure to comply with contractual obligations and/or instructions given by the Municipality, without justification; d) Due to bankruptcy or contractor's competition.

ARTICLE 42º- CONSTITUTED ADDRESS: The proponents must establish

address in the Olavarría Party, considering any notification and/or valid documentation sent to it. This address will produce in the administrative sphere the following: effects of the established tax domicile, all notifications being valid and binding, locations and communications that are carried out there. In case of modification during the term of the contract, the contracting firm will be obliged to communicate such circumstance to the Municipality without delay and in a reliable manner.

Likewise, the bidder must establish an electronic address in his first presentation. consisting of an e-mail address, which will produce all its effects without the need for resolution, and will be deemed to remain in force until another is designated. Notifications sent to the electronic address will be considered fulfilled on the following Tuesday or Friday - or the next business day if any of them is not - to the day on which the notification was made sent by the competent municipal department, in full accordance with the provided by Decree No. 1054/20 on electronic notifications.-

ARTICLE 43 - JURISDICTION: For all legal purposes hereof, the parties

are subject to the Contentious Administrative Jurisdiction of the Judicial Department of Azul, expressly waiving any other jurisdiction or venue that may eventually arise could correspond.



Municipalidad de Olavarría

**PUBLIC TENDER N° 8/25 "PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD
– 1st STAGE".**

SWORN DECLARATION

The undersigned company with real address at

..... and legal address at

of the city of Olavarría, declares that it has examined and accepts in its entirety the documentation of the

file, and that for any judicial issue arising from this tender, it is subject to the

Jurisdiction of the Administrative Litigation Court of the Judicial Department of Azul,

based in the City of Azul, expressly waiving any other jurisdiction that may be

reciprocate.

Clarification and signature of the proponent



Municipalidad de Olavarría

PUBLIC TENDER N° 8/25 “PAVEMENTATION WITH Ho So IN CARLOS PELLEGRINI NEIGHBORHOOD – 1st STAGE”.

ESTABLISHMENT OF ELECTRONIC ADDRESS

At the firm the undersigned, with
real address at and legal address at
..... of the city of Olavarría, constitutes
electronic address at where

Administrative acts issued within the framework of the

This tender, in accordance with Decree No. 1054/20 on electronic notifications,
whose operative part is transcribed below.-

Signature and clarification of the proponent

Note: The relevant part of Decree No. 1054/2020 is transcribed: “Olavarría, April 16, 2020 (...) DECREES:

ARTICLE 1: It is provided that as of April 2020, notifications of administrative acts issued by the Executive Department and its assisting agencies, addressed to agents, residents, suppliers, contractors, and taxpayers, may be carried out by digital means following the guidelines detailed herein, in accordance with article 63) of General Ordinance No. 267/80. Ordinance No. 3285/18 and 16) of Tax Ordinance No. 2460/99 and amendments.-

ARTICLE 2: It is established that any person appearing before the administrative authority, whether personally or representing a third party, must provide an electronic address consisting of an email address in the first written document or act in which they are involved. Those who have already initiated proceedings must report an email address upon their first appearance. The established electronic address will be fully effective without the need for a resolution and will be deemed to exist until another is designated. Municipal officials and agents must provide, in a sworn statement, an email address where notifications other than general notifications will be sent.

ARTICLE 3: The notification will be deemed to have been fulfilled on the Tuesday or Friday immediately following - or the following business day if one of them is not - the day on which the notification was sent by the competent municipal department, by e-mail.

The email will be presumed to be in the user's inbox unless a notification of an error is received.

ARTICLE 4: The Undersecretariat of Modernization, dependent on the Secretariat of Economic Development, is hereby instructed to carry out the development and implementation of new technological tools that allow for the optimization of traceability and efficiency of notifications by digital means; the Administration reserves the right to adopt any technological change that, without contravening the National Law or international standards, tends to optimize, adapt and expand the Use of digital notifications, in accordance with Ordinance No. 3285/18. Instruct the Personnel and Human Resources Directorate to require agents and officials to provide a sworn statement indicating an email address where they will receive personal notifications. Instruct the Tender Directorate; the Health System Supplies Directorate; and the Purchasing Office to require suppliers to provide an email address for receiving notifications.

In general, it is established that all municipal departments must require the complaint to be submitted to the email address for receiving notifications upon first presentation.



Municipalidad de Olavarría

PROCEDURE FOR CONTRACTING COMPANIES

1-PURPOSE

Establish the minimum safety and hygiene requirements that companies contracted by the Municipality of Olavarría must meet.

2- DEFINITIONS

Client: Company that contracts the provision of goods or services (Municipality of Olavarría).

Contractor: Company that provides goods or services and has a direct contractual relationship with the client.

Subcontractor: Company that provides goods or services contracted by a Contractor.

Contracting Party: Sector of the Client that manages the order for the provision of goods or services.

3- DEVELOPMENT

Legal Requirements:

The Contractor must know and apply:

- The Occupational Health and Safety Act No. 19,587 and its Regulatory Decrees No. 351/79, 1338/96, 592/04.

- Law No. 24557 on Occupational Risks and Decree No. 911/96.

- The instructions of the Client's Occupational Health and Safety Service and other regulations of the competent authority at the time of carrying out the work.

- Everything expressed in this standard is an extract from current regulations and must be strictly complied with when the subject matter applies.

- The Department of Occupational Health and Safety of the Municipality of Olavarría may add requirements to this standard, provided that they comply with the aforementioned regulations.

The **Contractor** is responsible for:

- Training your staff, ensuring that they are familiar with and able to perform their tasks upon entering our facilities.

- Submission of the legalized and updated contract between the Contractor and the person responsible for the Occupational Health and Safety Service.

- Presentation of personal data and registration number of the technician who will supervise the work.



Municipalidad de Olavarría

PROCEDURE FOR CONTRACTING COMPANIES

- Presentation of the legalized contract between the Contractor and the Company responsible for the Occupational Medicine Service.

The Contractor is responsible for the knowledge and compliance by all its personnel or the personnel of the Subcontractors, of the following:
provided for in this standard.

Documentation to be submitted: Technical File on Work

Prior to the commencement of work, the Contractor shall submit:

- Safety program approved by the ART, including the Start of Work form. If not applicable, a program with a general description of the tasks, identification, minimization, and control of risks **endorsed** by the ART must be submitted.

ART. In the case of a Monotributista Contractor, they must be endorsed by a Safety and Health Professional. If the Client considers the risk of any of the tasks unacceptable, the work methods or procedures, including the safety aspects to be considered, must be detailed.

- Specific additional documentation required in the contract document.

- Health examinations of its personnel, containing the provisions of current legislation and any other examination deemed necessary by the Contractor's Occupational Physician, in accordance with the type of specific risks of the contracted task and/or service.

- Copy of the training certificates for both the minimum content indicated herein and the specific content identified by the Client.

- Updated copy of PPE delivery sheets.

- Copy of the lifting equipment permit, if it will be used on site.

- Copy of inspections of oxy-cutting equipment, circuit breakers, slings, refreshment area hygiene, ladders, portable power tools.

- List of telephone numbers for Health and Safety representatives.

All of the aforementioned documentation will form the Technical File on Occupational Health and Safety at Work, which must be updated daily.

Personal Protective Equipment:

The Contractor is responsible for the provision and condition of Personal Protective Equipment, including the Subcontractor's personnel.

Staff will enter the work area wearing company clothing and provided with all necessary PPE according to the following details:

- orange helmet with the company logo or identification,
- safety glasses,
- ankle boots or safety shoes,
- gloves suitable for the tasks being performed.



Municipalidad de Olavarría

PROCEDURE FOR CONTRACTING COMPANIES

The supervisor must have a stock of spare PPE to replace what is needed during the performance of tasks.

Other Personal Protection Elements may be requested at the request of the Client, when the risk warrants it (hearing protection, respiratory protection, etc.).

Workshops, warehouses, changing rooms, dining room, sanitary facilities:

The availability of workshops, storage facilities, changing rooms, or dining areas within the scope of public works will be subject to negotiation in the corresponding specifications.

The Contractor shall request the Client to provide guidance on the use of available sanitary facilities or the need to install portable toilets (chemical toilets).

Security Tools and Elements:

The contracting company must provide the necessary safety elements to control the risks present in the tasks performed.

- Hazard demarcation tape. Mesh. Cones. Signage.
- Portable electrical panel with a differential circuit breaker and a thermal switch of the corresponding power to be protected, with its corresponding grounding (there must be 1 panel per team of people working in such a way as to ensure that no one can connect electrical equipment outside of a panel).
- Lifting equipment, slings and steel cables, electric and pneumatic tools and authorized hand tools, oxy-cutting equipment, ladders and scaffolding, under inspection by authorized personnel.

PROHIBITIONS

- The Contractor's personnel shall only remain in the work areas. You may not remain or visit sectors of other facilities where your presence is not duly justified for work reasons.
- Contractor personnel may not use cell phones while performing tasks or while driving vehicles or machinery. Cell phones must remain turned off while performing tasks. Cell phone use is reserved for supervisory personnel not performing manual tasks. In this case, cell phone use while walking is prohibited.
- Contractor personnel may not use personal or portable music playback systems such as MP3 players while performing tasks.
- It is prohibited to smoke, make fires or use elements that produce ignition sources in places where the following are stored, handled, transferred, transported, or produces flammable and/or explosive products or by-products, as well as where there is the presence of combustible gases in the environment or place considered risky from a fire and/or explosion perspective.



Municipalidad de Otavarría

PROCEDURE FOR CONTRACTING COMPANIES

- It is prohibited to bring or consume alcoholic beverages of any kind into the Establishment.
- It is prohibited to bring or consume drugs within the establishment.
- It is prohibited to bring food or eat in places not authorized for this purpose by the contractor.
- It is prohibited to bring in or carry knives or firearms.
- Running is prohibited within the work premises.
- Getting on or off moving vehicles is prohibited.
- It is prohibited to bring animals into the Establishment, whether permanent or temporary.

- Loose clothing, ties, scarves, key chains, rings, bracelets, chains, or any other item that could increase the risk of entrapment and/or snagging may not be worn.

- The use or removal of fire extinguishers belonging to the Client is prohibited. EXCEPT IN EMERGENCIES. In such circumstances, the Client's personnel must be notified immediately.

WASTE TREATMENT

In the event that the work to be performed generates any type of waste, the contractor must agree with the Client on the place and method of treatment thereof prior to the start of the work.

CIRCULATION AND PROVISIONS FOR THE TRANSIT OF VEHICLES CARGO AND PASSENGER

- Parking may only be carried out in designated areas, in reverse.

- The motor vehicles and machines used by the Contractor firm will be subject to a prior inspection, regardless of the term of inspection.
stay in the Establishment, through the Contractor's Safety and Hygiene Service.

- The vehicles of the Contractor Companies must be equipped with: the company's identifying logo, fire extinguishers, beacons, and
They will fully respect the General Traffic Regulations.

- All vehicles must be driven by qualified personnel.
effect with its corresponding driver's license. A copy of these must be included in the Technical File.



Municipalidad de Olavarría

PROCEDURE FOR CONTRACTING COMPANIES

- Traffic and/or access may not be blocked on any street, road, or other site without prior authorization from the Client (to be coordinated with the Construction Inspector). Once the aforementioned operation has been authorized, appropriate signage and beacons must be placed to prevent potential accidents.
- When transporting large loads, the Contracting Party must be notified so that it can analyze the circumstances of the task and indicate the precautions to be taken in each case. The presence of medium- or high-voltage power lines or overhead pipelines at the site must be taken into account.
- Loads protruding from the rear of a vehicle must be marked with a red and white flag (with red lights at night) and secured so that they cannot move.
- Vehicles may carry as many people as they have seat belts.
- Vehicles must have fixed seats with backrests.
- Vehicles must be closed and hygienic, and tools may not be transported in the same place where people are transported.
- Personnel transport vehicles must be properly licensed, and the driver must possess a license suitable for personnel transport.
- When parking a vehicle, the handbrake must be left on, the engine stopped and the gearbox in 1st gear.
- Personnel may not be transported on heavy machinery, such as tractors, motor graders, winches, forklifts, pickup trucks, etc.
- In the event of a vehicle breakdown, especially at night, it is mandatory to place warning beacons at a distance of no less than 20 meters before and after the obstacle. If fuel or explosives, the distance to be respected will be 50 m. before and after it.
- Towed vehicles: must have the company logo, a locking hitch pin and safety chains, license plate, and regulatory lights.
- Fuel rolling stock must comply with the provisions of the Law on the Transportation of Hazardous Substances.

PROTECTION AGAINST FALLING OBJECTS, MATERIALS AND PEOPLE

- The Contractor's Occupational Health and Safety Service representative will study the protections and safety measures to be adopted for workers in each case when tasks are being performed above two meters from the work surface, which could cause people, objects, and/or materials to fall. These measures must be notified to the Client's Occupational Health and Safety Department.



Municipalidad de Olavarría

PROCEDURE FOR CONTRACTING COMPANIES

SIGNALING

- All works will be fenced around their entire perimeter with a signage fence or other element agreed upon with the client, and duly signposted.
- At the entrance to the work, and in a clearly visible place, a sign must be placed containing:

- a) Name of the Work.
- b) Name of the Contractor company.
- c) Technical Director of the Contractor.
- d) Safety and Hygiene Professional
- e) A contact telephone number for emergency notifications outside of working hours.

The Contractor's Health and Safety Representative will be responsible for indicating the locations to be marked and the characteristics of the signage to be placed.

- Signs (posters, fences, beacons, chains, sirens, cards, etc.) will be maintained, modified, and adapted according to the progress of the work and any emerging risks.
- Lighting must be provided in areas that, due to force majeure, must be marked at night, even if no work is being carried out during these hours. Lighting must be yellow, with flashing lights.
- It is prohibited to place beacons, known as "open fire" beacons.

CHARACTER

When the task requires the use of cranes or other lifting equipment, the Contractor's Safety and Health Technician must be present.

If the load to be handled exceeds 5 tons, the corresponding "Load Study" and "Test Maneuver without Load" must be carried out.

All existing overhead power lines and lifting equipment support points must be analyzed.

Lifting will not be permitted during rainy weather or on days with winds exceeding 35 km/h.

EXCAVATIONS

When the Contractor's work includes excavations exceeding 1.20 meters in depth, a corresponding soil study must be submitted by a Civil Engineer, and written authorization must be requested from the Client.

SPECIAL TOOLS AND EQUIPMENT

- All machinery used by the Contractor must have all the appropriate safety equipment to prevent accidents and/or injuries to its operators, assistants, third parties, or facilities.
 - The Contractor must have a system for periodic monitoring of these.
 - When internal combustion engines are used, the fuel supply tank must be watertight, standardized, and suitable for transport and transfer.
- A spill containment system must also be in place. In case of



Municipalidad de Olavarría

PROCEDURE FOR CONTRACTING COMPANIES

If spills occur, all work must be stopped, containment and clean-up maneuvers must be carried out, and SSMA must be notified immediately.

SPECIAL WORK

- The Contractor may perform work involving percussion, sandblasting, welding, cutting, grinding, brushing, or any other work in locations where noise, radiation, particles, or any other form of contamination may occur, provided that this does not harm other workers. To this end, these tasks must be performed in isolated areas, using machines with silencers, and properly insulating or fencing the area using protective screens.

- Prior to performing any work included in the above description, the Contractor will assess the risks through its Health and Safety representative and the measures taken. These measures must be recorded on-site.
- Before carrying out any work on tanks, tank farms, vessels, equipment, pipelines, or locations that contain or have contained solid, liquid, or gaseous fuels or compressed air, the Contractor must apply for a written Work Permit.

- When for any reason they must use, transport, manipulate or store explosives, they must comply in full with the provisions of Law 20.429, Decree 302/83 (Chapter II, V, VI and VII) and always with prior authorization from the Client.

- During the execution of the works, the Contractor shall avoid placing equipment and/or materials in places where they may hinder the normal flow of vehicular and/or pedestrian traffic.

TOXIC SUBSTANCES AND HAZARDOUS MATERIALS

- When using hazardous, irritating, or toxic elements, workers must be aware of and take all precautions indicated in the product safety data sheet, protecting personnel with appropriate equipment and taking all necessary precautions to prevent contamination of air, water, and soil. If spills occur, work will be suspended until all containment tasks have been carried out, and the appropriate personnel will be notified immediately.

Client.

- When for any reason hazardous materials must be used, transported, handled or stored, the Client must be notified.

CONTRACTOR'S SAFETY AND HYGIENE SERVICE

- The Contractor must have a Safety, Health and Environment Service, managed by a licensed professional.
- The Client reserves the right to evaluate and authorize the personnel of the external Health and Safety services.

- The service hours required for the task will be governed by the table that figure below. This number may be modified in the specific specifications for tasks requiring greater control, depending on the risk and magnitude of the task. The additional cost is borne by the Contractor Company.



Municipalidad de Olavarría

PROCEDURE FOR CONTRACTING COMPANIES

HORAS MÍNIMAS REQUERIDAS				
hs - hombre p / día	SEMANAS			
	1ra semana	entre 1 Y 2 semanas	entre 2 Y 3 semanas	entre 3 Y 4 Semanas
8 - 32	8	10	12	15
40 - 79	16	20	22	24
80 - 119	16	20	24	28
120 - 159	16	24	28	32
160 - 199	16	24	32	40
200 - 239	16	28	36	44
240 - 279	16	28	40	52
280 - 319	16	32	44	60
320 - 359	20	36	48	68
360 - 399	20	36	52	72
400 - 439	20	36	56	76
440 - 479	20	40	60	80
480 - 519	24	40	64	84
520 - 559	24	40	68	88
560 - 599	24	48	72	92
600 - 639	24	48	72	96
640 - 679	32	56	80	104
680 - 719	32	64	88	112
720 - 759	32	64	96	120
760 - 799	32	64	96	128
> 800	40	80	120	160

*PARA OBTENER EL VALOR EN DÍAS HOMBRE DIVIDIR EL VALOR DE DÍAS (EQUIVALENTES) POR 8HS CONSIDERANDO ESA LA JORNADA LABORAL NORMAL



Municipalidad de Olavarría

TRAINING

**The training that people entering the work must receive
at least**

it will be

1. Use and maintenance of PPE
2. Order and cleanliness



Municipalidad de Olavarría

PROCEDURE FOR CONTRACTING COMPANIES

3. Use and maintenance of hand tools.
4. Construction signage.
5. Scaffolding and ladders
6. Working at height/scaffolding.
7. Lifting devices and load movements.
8. Manual and mechanical handling of loads
9. Electrical risk (mandatory use of circuit breakers and thermal switches).
10. Emergency Roles (Medical and Fire)
11. Basic Environmental Concepts
12. Procedure for accidents, incidents, and risk detection. Reporting before ART.

In the corresponding form, the specific topic, development of the topics, whether informative/audiovisual material was delivered, etc., duration of the training, last name, first name, ID and signature of the student, must be indicated individually.

signature of the company representative and the instructor.

The Contractor, or the Health and Safety Department, may add any training it deems appropriate and that contributes to accident prevention.

The Client reserves the right to evaluate the knowledge of the contractor's staff and request the repetition of the training accordingly.

Sanctions for the contractor and its personnel

In the event of any violation or non-compliance with these safety regulations, the Client reserves the right to apply any sanctions it deems appropriate.

The Client assumes that the Contractor is familiar with, understands, and applies the regulations set forth herein. Any damages or loss of profits suffered by the Client as a result of or arising from noncompliance with this procedure by the Contractor or its personnel shall be charged to the Contractor.



Municipalidad de Olavarría

SECRETARY OF PUBLIC WORKS, INFRASTRUCTURE AND PUBLIC SERVICES

Paving with H°S° in B° Carlos Pellegrini - 1st Stage

ITEM	DESIGNATION	UNIT	QUANTITY	UNIT PRICE		TOTAL
				In letters	In numbers	Pesos
1	Construction of a 0.20 m thick stone base	m2	2.200			
3	0.15 m thick concrete pavement	m2	2.200			
3	H°S° account 2m wide and 10cm thick with a 10cm thick compacted tosca base	Unit	240			